

QuickLinkTM

MOBILE

mobile fax and data communications



SMITHMICRO
SOFTWARE 

WINDOWS

QuickLink Mobile

For Windows

USER'S GUIDE

Documentation Revision 1

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Read Me First

Read this page to get the most out of QuickLink Mobile. Place a check in each box as you complete the step.

☐ **COM port selection**

Follow the installation instructions in Chapter 1 carefully. In particular, be sure to configure QuickLink Mobile for the same COM port as your modem. For example, if your modem is using COM2, set up QuickLink Mobile to address COM2. If you will be using QuickLink Mobile with a standard COM port (COM1 through COM4), which use interrupt request lines IRQ3 or IRQ4, we recommend you take advantage of QuickLink Mobile's auto-detection feature to find the COM port quickly.

☐ **Default settings**

QuickLink Mobile is designed to let you start sending and receiving fax and modem files as soon as it is installed. Before you begin, it is recommended that you review the QuickLink Mobile's default settings on pages 5 and 6. Quick Link's default settings should be satisfactory for most users. However, you may want to customize certain settings for your particular requirements. A few minutes of your time will ensure that you get the most out of QuickLink Mobile.

User's Guide contents

This User's Guide contains all the information needed to install, configure, use, and troubleshoot QuickLink Mobile. For your convenience, it is divided into four parts:

- **Part 1** — provides installation instructions and an overview of how to use QuickLink Mobile.
- **Part 2** — describes QuickLink Mobile's fax capabilities.
- **Part 3** — describes QuickLink Mobile's modem capabilities.
- **Part 4** — consists of 4 appendixes and the Index.

The following summary describes the contents of this User's Guide:

Part 1 — Overview

Introduction — describes QuickLink Mobile's features.

Chapter 1: Installing QuickLink Mobile — provides the minimum hardware requirements needed to use QuickLink Mobile on your PC. The introduction also provides step-by-step instructions for installing QuickLink Mobile, and lists the default settings that take effect when QuickLink Mobile is installed.

Chapter 2: Getting Started — describes how to send and receive faxes with QuickLink Mobile, as well as the online help features.

Part 2 — Fax Operation

Chapter 3: Viewing and Printing Faxes — describes how to view and print faxes. This chapter also gives a brief description of the fax file format.

Chapter 4: Advanced Fax Functions — describes advanced configuration options, the Fax Phone List, and broadcasting, in addition to describing the Fax Manager.

Part 3 — Modem Operation

Chapter 5: DataComm Overview — describes how to logon to a remote system, upload and download files, use Data Phone Lists, configuration and setup, and other aspects of data communications.

Chapter 6: Automation — describes the various ways to automate the repetitive processes of data communications, including the use of macro keys, scripts and the scripting language, and automatic online service login.

Appendixes

Appendix A: Terminal Emulation Keys — describes the keys applicable to various terminal emulations.

Appendix B: ASCII Character Table — lists the complete set of ASCII characters.

Appendix C: Advanced Considerations — describes what files are used by QuickLink Mobile, discusses IRQ settings, and other advanced topics.

Appendix D: Troubleshooting — describes problems that may arise in your communications system and how to resolve them.

Index

Table of Contents

Introduction

Unpacking your components	xi
Features	xii
General features	xii
Fax features	xii
Telecommunication features	xiii

Chapter 1

Installing QuickLink Mobile 1

Minimum system requirements	1
Before installing QuickLink Mobile	1
Card and Socket Services 2.1 vs. Card Configuration Utility (Point Enabler)	2
Installation instructions	3
Starting QuickLink Mobile for the first time	5
Elements of the main screen	6
Using the default configuration	7
Default fax settings	8
Default data settings	8

Chapter 2

Getting Started 9

Faxing out from a Windows application	9
Faxing out from QuickLink Mobile	11
Receiving a fax	12
Online help	13

Chapter 3

Viewing and Printing Faxes 15

QuickLink Mobile files	15
Viewing faxes	16
The fax viewer	16
Printing faxes	19
Advanced faxing	19

Chapter 4

Advanced Fax Functions 21

The fax phone list	21
Building and editing the list	21
Choosing fax destinations	22
Fax logs	23
Receive fax log	23
Send fax log	24
Converting fax files graphically	24
Exporting a fax into a graphic file	24
Importing a graphic into a fax	25
Fax scheduling	26
Sending a fax manually	27
Viewing the fax schedule	27
Sending the same fax to several destinations	28
The Fax Manager	28
Fax Manager options	28
Fax setup options	29
Send fax setup	29
Receive fax setup	32
Cover page setup	33

Chapter 5

DataComm Overview 35

Originating a data call (dialing out)	35
Quickly dialing a number	35
Using the Data Phone List	36
File transfers	39
The concept of file transfers	39
Selecting one file to upload	40
Selecting multiple files to upload	41
Upload status	42
Downloading files	43
Receiving one file	43
Receiving a batch of files	43
Download status	44
Capture text	44
Retransmitting what you see	45
Clearing the screen	45
Answering a data call	46
Using the ModemMonitor	46
Displaying the ModemMonitor	47
The status lights	47
Freeing the COM port	48

Protocols	48
ASCII	49
CompuServe B/B+	49
Kermit/SuperKermit	49
Xmodem	50
Xmodem CRC	50
Xmodem 1K	50
Ymodem	51
Ymodem-G	51
Zmodem	51
Data communications setup options	52
Line settings	52
Modem setup - Land connection	53
Modem setup - Mobile connection	55
Terminal options	57

Chapter 6

Automating QuickLink Mobile **61**

Online services quick access	61
Services setup	61
Connecting to online services	62
Macro keys	62
Scripts	63
Running Scripts	63
QuickLink Mobile Script Language Elements	64
Script Language commands	65

Appendix A

Terminal emulation keys **71**

Appendix B

ASCII character table **73**

Program filenames	75
Windows IRQ settings	75

Appendix C

Advanced Considerations **75**

The WIN.INI file and your system	76
The SMSSETUP.DAT file	77
Error Codes	78
AT command set	79
Fax Manager launching	80

Appendix D	
Troubleshooting	81
General/Data Comm troubleshooting	81
Faxing troubleshooting	82

Introduction

"QuickLink Mobile lets you travel the Information Super-Highway when you're stuck on the Interstate".

A modem or fax/modem links your PC or Notebook computer to the telephone line enabling you to exchange information with a remote modem, fax/modem, or fax machine. With a choice of either the Mobile or the Land connection type, QuickLink Mobile controls the exchange of information between your fax/modem and the remote modem, fax/modem, or facsimile machine.

Superior reliability for mobile fax/modem applications allows QuickLink Mobile to bring you the latest technology in fax/data communications software design. QuickLink Mobile fully conforms to the standard Windows user interface. The desirable Zmodem protocol featured in QuickLink Mobile allows for the transmission of multiple files in a single transfer. Moreover, Zmodem is the only protocol that automatically resumes transmission (in the event of an interruption) from the point where it left off, ensuring the precision and integrity of data across a cellular connection when you're on the road.

QuickLink Mobile is a communications software package that allows you to utilize all of the features of your modem or fax/modem. QuickLink Mobile will operate with all AT command set (Hayes) compatible modems as well as most other modems that are not compatible with the AT command set. The fax mode of QuickLink Mobile is designed to be used with either EIA Class 1 or 2 compatible send-receive fax/modems.

Unpacking your components

QuickLink Mobile for Windows comes on a high density 3½-inch diskette (1.44MB). If the diskette is missing or damaged, please contact your place of purchase immediately. If an incompatible disk size is provided, contact your modem manufacturer or fill out and return the Replacement Disk Form in the back of this book to Smith Micro Software, Inc.

Features

This section briefly describes the myriad of general, fax, and telecommunications features that QuickLink Mobile provides.

General features

A few of the general features that QuickLink Mobile provides are:

Complete Windows user interface. QuickLink Mobile uses standard Pull-down menus, Dialog Boxes and Mouse Control, so all features are only a familiar click away.

Button Bar. Many of QuickLink Mobile's most used features are accessible through a Button Bar, so these commands are only a mouse click away.

Context sensitive help. You can never get lost when using QuickLink Mobile. Context-sensitive help is always available within the dialog boxes. The term context sensitive means that the help topics change for each dialog box. There is also a Help command on the main menu, in case you need assistance at any time. With so much assistance at your fingertips, you'll be using QuickLink Mobile's many features in no time!

Support for COM1 through COM4. For even greater flexibility, QuickLink Mobile supports IRQ2 through IRQ7 as set in the Windows Control Panel to ensure that there is no conflict with any of the serial devices or interface cards installed in your PC. If you prefer, you can take advantage of QuickLink Mobile's automatic COM port detection and selection and let QuickLink Mobile automatically ascertain the COM port being used.

Fax features

The following section describes some of the fax features that QuickLink Mobile provides. For more information, refer to Chapters 3 and 4 in this User's Guide.

Foreground and background fax capability. In the foreground, you can manually send and receive faxes. Background operation lets you send and receive faxes while you use your PC for other applications.

Sending faxes. You can send faxes out of any Windows application that has printing capabilities. Any documents, spreadsheets, artwork, or other printable files can be sent to any fax machine at the touch of a button. Faxes can be sent immediately or at scheduled times, when telephone-line charges are at their lowest or when you are certain that the remote facsimile machine or fax/modem will be turned on. You can even broadcast your faxes to multiple recipients, when you need to make sure that multiple recipients receive identical faxes.

WYSIWYG faxing. Faxes sent out use the same fonts, layout and graphics as the original document, creating faxes of true laser-quality. As a result, you can create faxes that consist of high-quality fonts and graphics, to be assured that the received document will appear just like the original.

Cover page. QuickLink Mobile lets you include a cover page with your faxes. Your cover page can include high-quality graphics that have been scanned into your PC or created in your favorite drawing and paint programs.

Printing received faxes. If you prefer a hard copy, QuickLink Mobile can be instructed to send all received faxes to your printer. Any Windows supported printer, be it a dot-matrix, HP LaserJet compatible, or PostScript printer can print faxes in the background upon reception.

Fax phone list. A separate fax phone list is maintained for sending faxes to frequently dialed telephone numbers. Numbers can be assigned to Groups, so that a fax can be easily sent to any number of fax machines with just a few keystrokes.

Export fax capabilities. QuickLink Mobile lets you export faxes into PCX, DCX and TIFF graphic file formats, allowing for importing faxes into Paint, Drawing, or OCR programs.

Telecommunication features

The following section describes some of the telecommunication features that QuickLink Mobile provides. For more information, refer to Part 3 in this User's Guide.

Background file transfers. Uploads and downloads can take place while using other programs within Windows. A large file transfer need never keep you from working!

Transfer protocols. For your convenience, QuickLink Mobile provides 10 transfer protocols: ASCII, CompuServe B/B+, Kermit, Super Kermit, Xmodem, Xmodem CRC, Xmodem 1K, Ymodem, Ymodem G and Zmodem.

Terminal emulators. Five terminal emulators are provided: ANSI, TTY, VT52, VT100, and VT102.

Complete scripting language. This feature lets you write miniature programs so that logging onto Host computers can be done automatically, with little, if any, keyboard input.

Easy access to popular online services. QuickLink Mobile automates the logon sequence for popular services such as CompuServe, Dow Jones, and Genie.

Chapter 1

Installing QuickLink Mobile

Chapter 1 describes the requirements for installing QuickLink Mobile, provides step-by-step instructions for installation, and details what to expect when running the program for the first time.

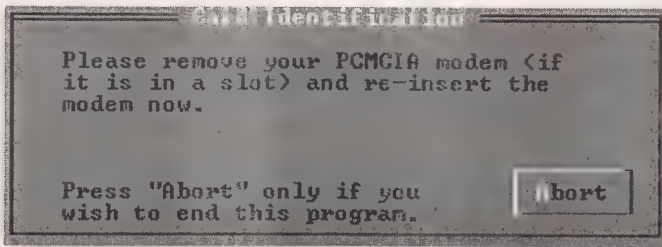
Minimum system requirements

To use QuickLink Mobile on your computer, make sure you have the following **minimum** system requirements:

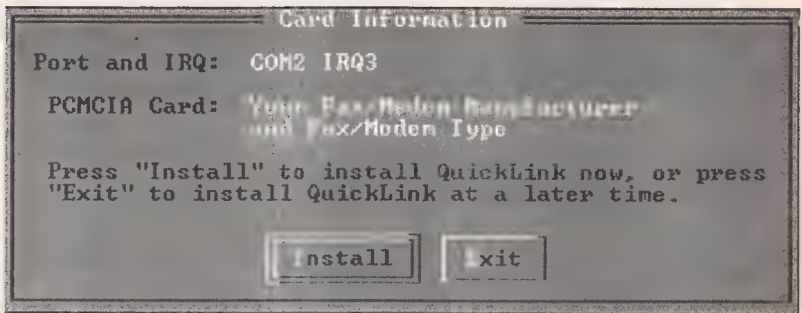
- Microsoft Windows 3.1 or later
- IBM-PC AT, PS/2 or compatible computer (286 or higher)
- 2 Megabyte of RAM memory
- Hard disk with 2 MB free disk space
- MS-DOS or PC-DOS operating system 3.3 or later
- CGA, EGA, VGA, 8514/A, or Hercules graphics adapter and monitor
- EIA Class 1, Class 2, or Class 2.0 standard fax/modem

Before installing QuickLink Mobile

Before installing QuickLink Mobile, you must run the CardTest Utility. Make sure that your PCMCIA modem is plugged into your notebook. Insert the QuickLink Mobile disk into drive A (or B), and at the DOS prompt type "CardTest" and press Enter. This utility verifies that you have successfully installed the PCMCIA Modem and Card Socket Services (CSS), and that the modem is ready to recognize and install QuickLink Mobile.



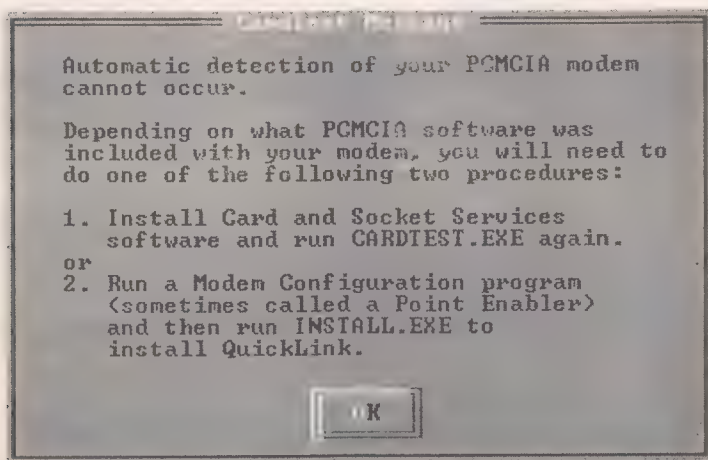
When the above screen appears, simply remove and re-insert your PCMCIA modem. (Select Abort only if you wish to end this program.) This allows CardTest to properly identify your modem specifications. After you re-insert the modem, CardTest automatically identifies the modem, and produces the following screen:



Click on "Install" to continue, or exit to install QuickLink Mobile at a later time.

Card and Socket Services 2.1 vs. Card Configuration Utility (Point Enabler)

QuickLink Mobile's CardTest utility will display the following message if Card and Socket Services (CSS) is not present.



There are two separate ways to resolve this issue:

1. Install CSS diskette supplied by the modem manufacturer and run CardTest again.
2. Install Card Configuration Utility (or Point Enabler) supplied by the modem manufacturer and proceed directly to QuickLink Install from DOS or Windows.

Some modems will require solution #1, while others are designed for the Config/Point Enabler instead and require solution #2.

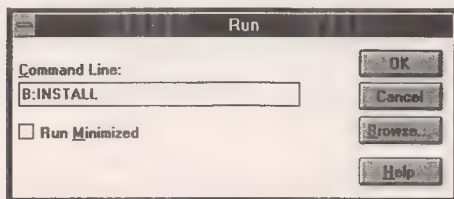
Note: Though most PCMCIA modems include a disk containing Card and Socket Service 2.1 (CSS), most newer Notebooks or Laptops already feature this driver. QuickLink Mobile's CardTest will provide a flash message screen if CSS is missing or improperly installed on the system. If CSS is missing, contact your modem manufacturer for the diskette. If CSS is incorrectly installed, please refer to the hardware manual for your new modem. For optimum results, we recommend the use of CSS version 2.1.

Installation instructions

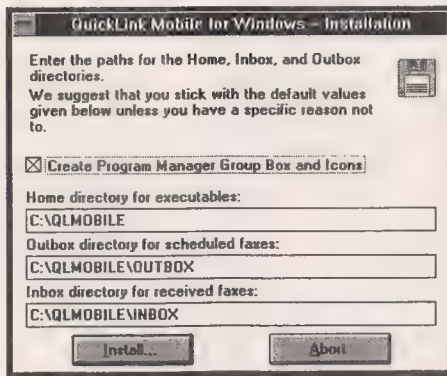
For your convenience, QuickLink Mobile comes on a 3½-inch diskette; replacement disks or alternative sizes can be ordered with the Replacement Disk Form at the end of this book. All files on the QuickLink Mobile Install disk are compressed and cannot be used until the Install program has been run. The Install

program can be run from either the DOS prompt or with the Windows **Run** command. The following steps will walk you through the Installation process.

1. Turn on your computer. If your computer boots into Windows automatically, jump ahead to step 3. If your computer launches a menu program or shell, quit out of it and go to the DOS prompt.
2. Place the QuickLink Mobile diskette into the appropriate drive. If you are installing from the A: drive, type **A:INSTALL** and press the Enter key. If you are installing from the B: drive, type **B:INSTALL** and press the Enter key. The Install program will then launch Windows in Standard Mode. Jump ahead to step 4.
3. To run the Install program from the Windows Program Manager, pull down the **File** menu and choose **Run**. At the Command Line field, type in **A:INSTALL** if the QuickLink Mobile Install disk is in drive A; type **B:INSTALL** if it is in the B drive. Press the Enter key or click **OK**.



4. The main installation dialog box appears on screen with the default directory **C:\QLMOBILE** as the install directory for QuickLink Mobile's main program files. The Inbox and Outbox are sub-directories of the install directory. To accept the defaults, simply press the Enter key or click the **Install** button.



5. The **Default Printer** dialog box appears, prompting you to select the QuickLink Mobile Driver as your Windows default printer driver. Click **No** if you want to keep your regular printer driver as the default. Click **Yes** or press the Enter key if you want the Fax driver to be the default Windows printer. This setting can be changed at any time with the Windows Control Panel.
6. When the installation is complete, a QuickLink Mobile Program Group is created in the Program Manager with the QuickLink Mobile program icons inside. There is also an icon labeled **Read Me!**, which contains important information and any changes that have occurred to the software since this manual was printed. We recommend that you read it by double-clicking the **Read Me!** icon. It can be printed from Notepad or Write for future reference.
7. Remove the QuickLink Mobile disk from the floppy drive and put it in a safe place away from heat, dust, and magnetic fields. This is also a good time to fill out the registration card and mail it in.

Starting QuickLink Mobile for the first time

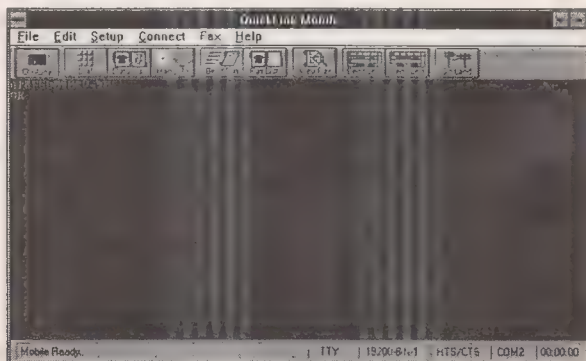
There are several ways to run the QuickLink Mobile main application. When in Windows, the most straight-forward way is to open the QuickLink Mobile Program Group by double-clicking on it, and then double-clicking on the QuickLink Mobile program

icon to launch the application. It can also be launched by pulling down the **File** menu, choosing **Run**, and running the file **C:\QLMOBILE\QL2FAXW.EXE**.

The first time QuickLink Mobile is run, the program will ask which **COM port** your modem is connected to in the Modem Setup dialog box. You are given the option to either directly select the appropriate COM port (COM1 through COM4) or use the **Auto Detect** feature, which is the default. This default choice allows QuickLink Mobile to test the COM ports on your PC and automatically determine which COM port is being used. Since most communications problems involve incorrect COM port selections, it is recommended that you accept the default selection of Auto Detect. If QuickLink Mobile does not find a COM port, it prompts you to select a default COM port. If your computer has another serial device, such as a serial mouse or a scanner, be sure each serial device has a different COM port and IRQ setting than the fax/modem QuickLink Mobile is using. Otherwise, the serial devices and QuickLink Mobile will not operate properly. For more information on COM ports and IRQ settings, refer to Appendix C.

Elements of the main screen

When you start QuickLink Mobile, the main screen appears. The main screen consists of the following elements:



The Title Bar is the top of the QuickLink Mobile window, and responds to being dragged and clicked on like other Windows programs. The last icon on the titlebar is the Go Mobile/Go Land toggle button, which switches between a cellular or non-standard

connection and a land connection. The connection mode selected is displayed in the Terminal Status Bar, and can also be activated from the Connect pull-down menu. (When installed, QuickLink Mobile defaults to the Land connection.) The Menu Bar consists of the pull down menus which contain all of QuickLink Mobile's commands; they can be accessed with the mouse or through Alt-Key combinations. Beneath the Menu Bar is the Button Bar, which provides quick access to QuickLink Mobile's most frequently-used commands. The Terminal Window appears below the Button Bar. When you perform data activities, the data will scroll across the terminal window as it is sent to, or received from, the remote modem. Direct communication with your fax/modem also takes place within the terminal window — AT commands can be typed in directly and the modem responses can be read. The Initialization string is just such an AT command and the **OK** beneath it is a modem response.

The Terminal Status Bar runs along the bottom of the QuickLink Mobile window, and provides you with a display of important communications settings and messages about current activities. For example, if you hang up following a modem call, the Message **Disconnecting...** appears. Selecting a menu option makes a brief explanation appear here too. Information to the right of this message area displays:

- The current terminal emulation (the default is TTY)
- The current line settings (baud rate, data bits, parity bit, stop bits)
- The flow control being used, if any.
- The serial port QuickLink Mobile is addressing (This is the COM port setting).
- The duration of your data call (the timer is also controlled using the **Start Timer**, **Stop Timer**, and **Reset Timer** commands in the **Edit** menu).

You can also click on the current terminal emulation, line settings, flow control, and/or COM port information in the terminal status bar to change these parameters. If you desire, you can turn off the terminal status bar with the **Terminal Options** dialog box from the **Setup** menu.

Using the default configuration

When QuickLink Mobile is started for the first time, certain default settings go into effect. These settings allow the majority

of users to begin fax and data transmissions immediately. The first table shows the default settings for fax communications, and the second shows the default settings for data communications. If you need to change settings, or want to find more information about them, refer to the appropriate page numbers.

Default fax settings

Parameter	Setting	See Page:
Maximum transmit baud rate	14400	29
Number of redialing attempts	3	31
Seconds between redialing attempts	30	31
Cover page sent with faxes	Enabled	31
Default cover page information	Blank	33
Default cover page graphic	None	34
High resolution faxes sent	Disabled	30
Paper size of sent faxes	Letter	30
Print Received faxes on receive	Disabled	33
Fax receiving at Windows startup	Disabled	32

Default data settings

Parameter	Setting	See Page:
Baud rate	19200	51
Data, parity, stop bits	8, None, 1	51
Flow control	RTS/CTS	52
Terminal emulation	TTY	58
Autobaud	Disabled	57
Redial busy data number	Enabled	57
Auto-answer a call	At first ring	53,55
Answer mode	Auto Detect	53,55

Where to proceed

QuickLink Mobile is now successfully installed and ready for faxing documents out of any Windows application, sending faxes from within QuickLink Mobile itself, and can be set for receiving faxes. The next chapter gets you started faxing.

Chapter 2

Getting Started

Chapter 2 describes how to begin using QuickLink Mobile. It describes how to send a fax from a Windows application, from within the QuickLink Mobile application, and how to prepare to receive a fax. It also describes how QuickLink Mobile receives data/modem calls, and the online help functions as well.

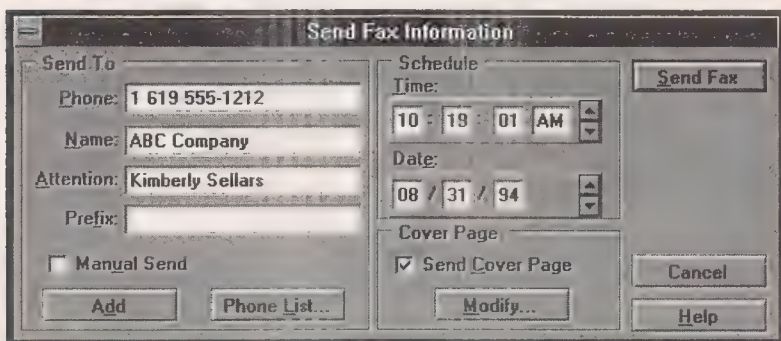
Faxing out from a Windows application

The most convenient way to send out a fax is to do it directly from your Windows programs. The benefits of sending out faxes in this manner are that there is no need to interrupt your work to fax out, and that all of your fonts, graphics, and formatting are incorporated: True WYSIWYG faxing!

The process is simple. When QuickLink Mobile is installed, it installs a print driver called **QuickLink Mobile on FAX/MODEM**. When you print to this print driver, your document is converted into a faxable format, the Fax Manager activates, and the fax/modem picks up the phone line, dials, and sends out the fax.

As an example, minimize any program you are in and double-click on the **Read Me!** icon in the QuickLink Mobile Program Group, which will run the Windows **Notepad** program and load the Read Me! file. Alternatively, you could double-click on the Windows **Notepad** icon, located in the **Accessories** group of the Program Manager, and open the file **README.TXT** in the QuickLink Mobile directory.

To fax this document, simply pull down the **File** menu and choose **Print Setup**. Click on **Specific Printer** and choose **QuickLink Mobile**. Clicking on the **Options** button at this point will call the **Fax Driver Setup** dialog box, which sets the fax's **Resolution** and **paper size** — click **OK** to set. Next, pull down the **File** menu and choose **Print**.

The image shows a 'Send Fax Information' dialog box. It is divided into two main sections. The left section, titled 'Send To', contains input fields for 'Phone:' (1 619 555-1212), 'Name:' (ABC Company), 'Attention:' (Kimberly Sellers), and 'Prefix:'. Below these is a checkbox for 'Manual Send' and two buttons: 'Add' and 'Phone List...'. The right section, titled 'Schedule', contains a 'Time:' field (10:19:01 AM) and a 'Date:' field (08/31/94). Below these is a 'Cover Page' section with a checked checkbox for 'Send Cover Page' and a 'Modify...' button. On the far right, there are three buttons: 'Send Fax', 'Cancel', and 'Help'.

After a pause for “printing”, the **Send Fax Information** dialog box appears, which is where the telephone number is input and the **Cover Page** set. The left portion of the dialog box allows you to input the name and phone number of the fax recipient. Click on the **Phone List** button if you want to choose a number from the **Fax Phone List**, or click on **Add** if you wish to add the current name and number to the Fax Phone List. The **Manual Send** checkbox allows for sending a fax to a fax machine which is already on the telephone line, such as when an operator must make a connection for you. When checked, clicking the **Send Fax** button will prompt you to pick up the phone and dial manually, allowing you to send the fax when the line is already off-hook.

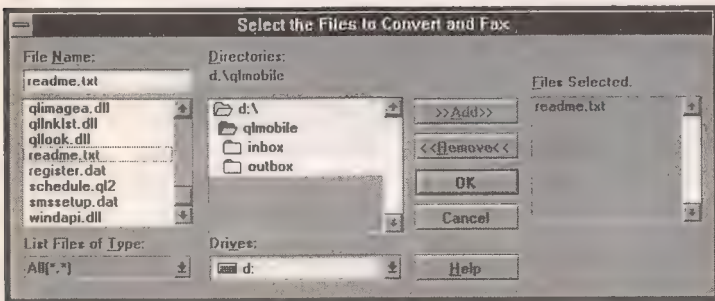
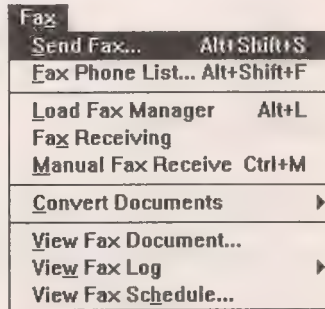
The right side of the dialog box allows you to **Schedule** the time of transmission of the fax; just key in the date and time you want the fax sent to send it later — leave it alone if you want to send the fax now. If you wish to send a Cover Page, check the **Send Cover Page** check box. This Cover Page will contain the information defined in Cover Page Setup dialog box in the QuickLink Mobile main application. The Cover Page for this fax can be changed or a note added to it by clicking on the **Modify** Cover Page button. Fill out this dialog box with the information needed to send out a test fax, and click on the **Send Fax** button when the information is correct.

When **Send Fax** is clicked, the document will print to the fax/modem, calling up the **Fax Manager**. The Fax Manager, in turn, dials the telephone number, displays the status of the fax, and alerts you when the fax is finished. If the Fax Manager appears only as an icon at the bottom of the screen, double-click it to maximize the Fax Manager dialog box. After it sends, you can close or minimize the Fax Manager and continue to work as though you had simply printed to your normal printer.

Faxing out from QuickLink Mobile

While faxing directly out of your application is probably the most convenient way to fax a document, there are instances when faxing out from the QuickLink Mobile main application makes sense, such as when you want to quickly fax out an unformatted **TEXT** file (such as your AUTOEXEC.BAT file to a technician), or pre-converted fax files, or previously received faxes.

For this example, start the QuickLink Mobile program — after it loads pull down the **Fax** menu and choose **Send Fax**, or if you like, click on the **Send Fax** button on the Button Bar. This calls up the **Select Files** dialog box, which is where files to fax out are selected and converted. There are three main sections to this dialog box: the **Directories** list box in the center, the **File Name** list box to the left, and the **Files Selected** list box to the right. Select the directory in which the file you want to fax is located using the **Directories** list box, highlight the file in the **Files Available** list box, click the **Add** button to bring the file over to the **Files Selected** list box, and click **OK** when finished.



There is already a text file called **README.TXT** in the QuickLink Mobile directory to illustrate faxing out this way, so select the **QLMOBILE** directory in the **Directories** list box. The **Files Available** list box will display all the files in this directory; use the scroll bar to scroll down until **README.TXT** is visible and click on it once to select it. When highlighted, click the **Add** button.

The **Document Type Selection** dialog box appears in order to confirm the type of file selected. The README.TXT file is a text file, so ensure that **Text** is chosen and click **OK**. This adds the file to the Files Selected list box. You could add up to 255 files to the Files Selected list box to fax out in this manner, but for now, just click **OK** to fax this one file.

The **Send Fax Information** dialog box results, and it is virtually identical to the Send Fax Information dialog box you used when faxing out of Notepad. Fill out the information requested and click **Send Fax** when finished. As before, the file will convert to a faxable format, start up the Fax Manager, dial, and send.

Receiving a fax

Receiving a fax is an almost totally automatic procedure. To receive a fax, simply have the **Fax Manager** loaded into memory and **Fax Receiving** enabled (this is the default setting). It can be minimized at the bottom of the screen, open and maximized, or open behind other windows; it merely needs to be available in memory. This can be done by simply double-clicking the Fax Manager icon from the QuickLink Mobile group in the Program Manager, or by choosing **Load Fax Manager** from the **Fax** menu within QuickLink Mobile. Since its default setting enables it to receive faxes, it is set up and ready to receive immediately. The Fax Manager can be launched automatically when Windows starts up by configuring it to do so in the **Receive Fax Setup** dialog box under the **Setup Menu** (see Chapter 4).

The Fax Manager normally stays in an **Idle** state while awaiting a call; it switches over to active while actually answering. When a fax is received, it is automatically logged in the **Receive Fax Log** and the fax is saved on the hard disk in the **Inbox** sub-directory in the QuickLink Mobile directory. The first file gets named FAX0001.REC — the 4 digit number increases with each received fax. The received fax file can be viewed, printed, and re-sent at any time once saved on disk; QuickLink Mobile can be configured to automatically alert you and print the fax as soon as it arrives while operating entirely in the background as well (See Chapter 4).



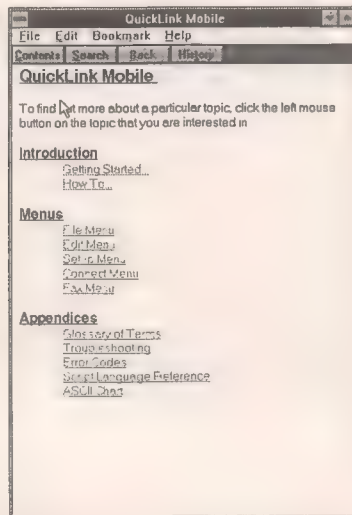
FaxManager
.. Idle

The Fax Manager's default settings will answer the incoming call to determine the call type: either fax, data, or voice. If the call is a fax, it will be received in the manner just described above. If it

is a modem/data call, the Fax Manager will seamlessly pass the call into the QuickLink Mobile telecommunications mode, it will even automatically launch the QuickLink Mobile main application if it isn't already running. If the incoming call isn't a fax or modem/data call, QuickLink Mobile will display a message on screen to inform you a voice call has come through: Pick up the Phone. In short, the Fax Manager will always answer the incoming telephone call and determine its nature unless otherwise configured. For more detailed information about the Fax Manager, refer to Chapter 4.

Online help

At almost every point in QuickLink Mobile, there is a **Help** button just waiting to be clicked if you get lost or don't know what to do next.



Additionally, there is a **Help** menu at the right end of the menu bar for broader concepts and the Help Index. This online help system summarizes most of this manual and can even be printed by choosing **Print Topic** from the **File** menu in the Help Window.

Chapter 3

Viewing and Printing Faxes

There is little benefit in receiving faxes unless you can easily look at them and print them. Chapter 3 explains how to print and view faxes, and provides a description of fax files and their usual locations.

QuickLink Mobile files

QuickLink Mobile has a standard naming convention for received faxes and how they are saved. All received fax files have the three letter file extension **.REC**. Also, faxes are numbered sequentially and have the word **FAX** as the first three letters in the filename. Therefore, your first received fax will have the file name **FAX0001.REC**. Received faxes are also saved in the same directory every time, so there is no need to search your hard disk for fax files. The default location is the **INBOX** subdirectory within the QuickLink Mobile directory (**C:\QLMOBILE\INBOX**), though this can be set differently with the **Receive Fax Setup** dialog box under the **Setup** menu (refer to Chapter 4).

Out going fax files have an identical internal format as received fax files. The only difference is the three letter file extension so you can easily keep track of which faxes are incoming and which are outgoing. Outgoing **.QFX** fax files are created when you convert documents and graphics files to the faxable format by clicking the **Save to File** button in the **Send Fax Information** dialog box. **.QFX** files are normally stored in the **OUTBOX** subdirectory within the QuickLink Mobile directory (**C:\QLMOBILE\OUTBOX**), though this can be set differently with the **Send Fax Setup** dialog box under the **Setup** menu (refer to Chapter 4).

***Note:** .REC files and .QFX files are the same type of files with different three letter extensions. They are printed, viewed, faxed out, and in every other way handled the same way by QuickLink Mobile.*

Viewing faxes

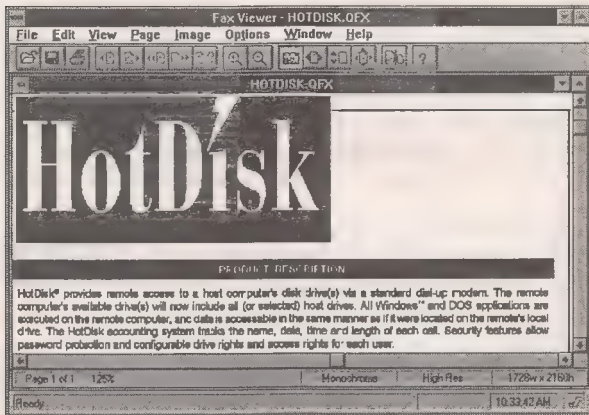
QuickLink Mobile has a separate module used solely for viewing faxes; the **Fax Viewer**. The Fax Viewer can be accessed several ways: it can be launched by double clicking on the **View Fax** icon in the Windows Program Manager, by clicking on the **View Fax** button on the QuickLink Mobile Button Bar, or from within the QuickLink Mobile application by choosing **View Fax Document** from the **Fax** menu. For this example, launch the Fax Viewer from the QuickLink Mobile main application with the **Fax** pull down menu.

Choosing **View Fax Document** calls up the **View Fax Document** single file selection dialog box. It is here that specific QFX or REC files can be selected to view. To select one, simply select the directory where the file is with the **Directories** list box and double click on the file you want to view in the **Files** list box. Choosing **Open** in the Fax Viewer will call this same dialog box to select a fax file to view. There may already be a file called README.QFX in the QuickLink Mobile directory to test the viewer, so select this file to view. This file was created when sending the README.TXT file from the QuickLink Mobile main application in the previous chapter. If you did not follow the tutorial, this file will not exist. For the steps to create the README.QFX file, refer to Chapter 2.

The fax viewer

When a file loads into the Fax Viewer, it loads full size at the upper left corner of the fax. Immediately above the fax window is the Viewer button bar, which provides easy, visual access to all Viewer functions. Aiming the pointer at an icon produces a yellow flash card which explains that button's function. Viewer functions are duplicated in the pull down menus if you don't want to use the button bar (the button bar can be removed by choosing **Button Bar** in the **View** menu).





From the pull down **Edit** menu, choosing **Copy**, **Paste**, **Copy Page**, **Copy Page to File** or **Copy Clipboard to File** allows you to copy graphics or text into an existing file or save it to a fax file. Holding down the left mouse button and dragging the pointer selects the area to copy, and the same steps are used to select an area to paste it into the Viewer. Pressing **Save** on the Button Bar saves the active image, as well as all Copy/Paste changes in the current fax file.

The first button on the button bar is **Open File**, which allows you to open .QFX and .REC fax files within the module. The Fax Viewer also makes it possible to open and view .BMP, .HFX, .PCX, .DCX, and .TIF files. The second button is **Save**, which saves the active image in the viewer (preserving changes made from the **Edit** and **Image** menus only). The third button is **Print**, which will print the currently-viewed fax to your active printer (Refer to the next section for more information about printing faxes). These commands can also be accessed from the **File** menu, and the Fax Viewer allows you to open and view more than one fax file at once.



The next set of five buttons is used to change pages in multiple-page faxes. The first two in the set will display the **Previous Page** and **Next Page** of a fax document, respectively. Buttons three and four will leap to **First Page** and **Last Page** in the fax. The fifth button is **Go To Page ?**, which allows you to go directly to a specified page within the currently-viewed fax. Note that these buttons are not available when viewing a single-page fax. These commands are duplicated in the **View** menu.



The next two buttons, **Zoom In** and **Zoom Out**,



control the view and movement of the fax within the Fax Viewer window, by increasing or decreasing the magnification of the fax document. Clicking the buttons more than once will increase or decrease the **Zoom Factor** in increments of 25%. These commands are also duplicated in the **View** menu. From the **Options** menu, selecting **Image Options** allows you to set the default increment level for the **Zoom Factor**.

The following set of four buttons allows you to change the view of the fax. The first is the **Normal View** button, which displays the fax



at its actual size. Normal view shows the fax when it loads full size into the Fax Viewer, so the button appears pressed in. Next to it is the **Fit Horizontal** button, which makes the current page fit in the Fax Viewer window horizontally, followed by the **Fit Vertical** button that does the same thing, only vertically. Depending on how the Fax Viewer window is sized (by moving the scroll bar arrows), the Fit Horizontal and Fit Vertical can dramatically alter the view of the fax. The fourth button in this group is **Fit All**, which provides a view of one entire page (all four edges). These commands may also be accessed from the **View** menu.

The next button is **Thumbnail View**, which splits the screen in to two parts; the right screen is a miniature full page for selecting the view, while the left screen shows a magnification of the view that has just been selected. This command is also accessible from the **View** menu.



The final button is **Contents**, which launches the Table of Contents of QuickLink Mobile Help within the viewer.



In addition, the **Image** menu offers further control of the fax image with the following selections; **Rotate** (to clockwise 90, 180 or clockwise 270), **Flip Horizontal** and **Flip Vertical** (which allows you to flip the fax image along both axes), and **Scale Image** (which lets you select the height and width of the fax image). Current height and width are displayed on the status bar below the Fax Viewer window, along with the resolution (high or normal) and type (monochrome or color) of the image being shown.

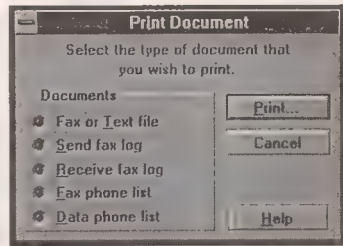
When you are through viewing a fax, choosing **Exit** from the **File** menu will close the Fax Viewer window. If you are only viewing a fax there is no command (or need) to save the file, since the fax file itself is not altered in any way by just viewing. (Choosing

Save on the button bar is only required when you wish to save changes executed from the Edit and Image menus.)

Printing faxes

Faxes can be printed with any Windows compatible printer, so printers successfully configured to print out files from other Windows programs will successfully print faxes with QuickLink Mobile.

Printing faxes is a very simple process. From within the QuickLink Mobile main application or the Fax Viewer, pull down the **File** menu and choose **Print**. Choose **Fax or Text File** in the resulting **Print Document** dialog box and click **Print**. Choose the fax file you want to print from the **Print File** dialog box by selecting the directory in the **Directories** list box and double clicking on the file in the **Files** list box (this step is skipped when printing from the fax viewer, which prints the currently viewed fax).



The final steps to printing a fax are completed in the **Print** dialog box. Here you can select the printer you wish to print to by clicking the **Setup** button, setting the **Print Quality** with the pull down menu, and selecting the range of pages to print with **Page Range**. The **Image Scale** will print full size 8 1/2" by 11" faxes at their original size; long faxes can be automatically scaled to fit on a single sheet of paper by choosing **Scale to fit page length**.

Advanced faxing

If you have the need to manipulate your faxes and fax files further, refer to the next chapter for an explanation of advanced faxing functions.

Chapter 4

Advanced Fax Functions

You now know everything you need to make QuickLink Mobile send and receive faxes, print and view them, and all basic faxing skills. But there is much more QuickLink Mobile can do to meet your special faxing needs. These special functions are covered in Chapter 4, and include:

- How to use the Fax Phone List
- How to keep track of your faxes by using the Fax Logs
- How to convert faxes into graphic files and vice versa
- How to schedule faxes to send at a later time
- How to view the outgoing fax schedule
- How to send a fax to someone who is already on the line
- How to send the same fax to up to hundreds of fax machines
- How to use the Fax Manager, and what it does
- How to change QuickLink Mobile's default fax settings

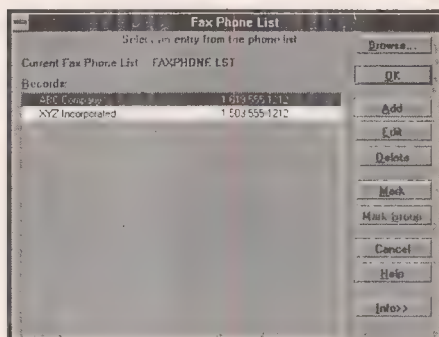
The fax phone list

The Fax Phone list provides access to your personalized fax phonebook for frequently dialed fax numbers. It can be accessed by choosing **Fax Phone List** from the **Fax** menu and from the **Send Fax Information** dialog box, as well as directly from the Button Bar with the **Fax List** button.



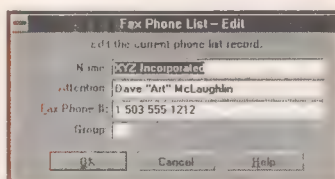
Building and editing the list

The **Fax Phone List** dialog box is comprised of the entry list box and its function buttons. To add a number to the Fax Phone List, click the **Add** button. The **Fax Phone List Add** dialog box will appear, providing text boxes for the **Name**, the **Fax phone number**, and the **Group** identifier, if desired. If a fax is normally sent to someone specifically within a company, a fax can be addressed to their attention by entering their name in the **Attention** field.



The **Group** identifier allows you to define a collection of fax numbers that may be dialed by selecting one member of the group. For example, you could easily send the same fax to all your customers by giving each person on your list who is a customer the same **Group** character, and then simply sending a fax to the group. Each person would receive the fax. A **Group** identifier may be any character on your keyboard. Using a **Group** identifier is optional. After entering the information required, click the **Ok** button to add the entry to the directory.

The **Edit** button is used to modify an entry listing. To select an entry to edit, select the desired name and number by clicking on it and click **Edit**. The **Delete** button will remove the selected entry — the **Info** button completely displays the entire entry.



Choosing fax destinations

Once the Fax Phone List contains the fax numbers of your intended fax recipients, choosing entries to fax to is done with the **Mark** and **Mark Group** buttons. The **Mark** button is used to select those fax numbers to which you wish to send a fax — you may send a fax to as many different numbers as you have entries in the Fax Phone List. Highlighting the entry you wish to send the fax to and clicking **Mark** will mark it. Entries must be marked before faxes can be sent to them; a marked entry has an icon placed next to it to show its marked status. **Mark Group** instructs QuickLink Mobile to select the entire group of fax

numbers based on the Group of the highlighted entry. Marking instructs QuickLink Mobile to send a fax document or several documents to the Marked fax numbers when the **OK** button is clicked. The **Cancel** button will remove the Fax Phone List from your screen without dialing a remote fax telephone number or recording any updates made to the fax phone list.

If you are choosing **Fax Phone List** from the main application and a fax document has not yet been specified, the **Select Files** dialog box appears, prompting you to select a document to fax. It functions exactly as if choosing **Send Fax**.

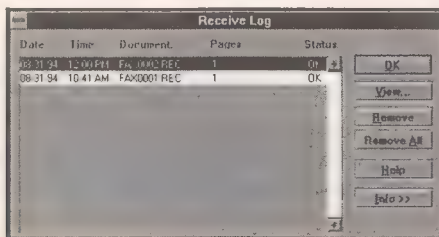
Fax logs

By choosing **View Fax Log** from the **Fax** menu, you can view a log of faxes that have been sent and received with the **Send Log** and the **Receive Log**. Both logs provide the status of the 200 most recent fax transmissions, and can be printed by choosing **Print** from the **File** menu. These logs are also accessible from the **Send Log** and **Recv. Log** buttons on the Button Bar.



Receive fax log

The Receive Fax log provides a line of information for each fax transmission received. The log displays the **Date**, **Time**, **Document** file name, the number of **Pages** received, and the **Status** of the received fax. A specific entry can be removed with the **Remove** button; the entire log can be cleared by clicking **Remove All**.



By clicking the **Info** button, additional information will be displayed for the selected fax, including the **Remote ID** of the sending fax, the **Resolution**, and the specific **Error** of a failed

fax receive, if any. A fax can be viewed directly from the log by simply double-clicking it from the list box.

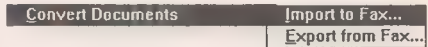
Send fax log

Each entry in the Send Fax log represents a transmitted fax from either the main application or the print driver. Each entry includes the **Date** and **Time** of the transmission, the **Name** of the fax called, the **Phone Number**, and the **Status** of the sent fax. A specific entry can be removed with the **Remove** button; the entire log can be cleared by clicking **Remove All**.

By clicking the **Info** button, additional information will be displayed for the selected fax, including the **Resolution** of the sent fax, the **Duration** of the call, and the specific **Error** of a failed fax send, if any.

Converting fax files graphically

All faxes that are received are **graphics**, as opposed to **text** files. As such, you can modify a fax by converting it into a common graphic file so that it can be edited with a **Paint** program, such as Windows Paintbrush.



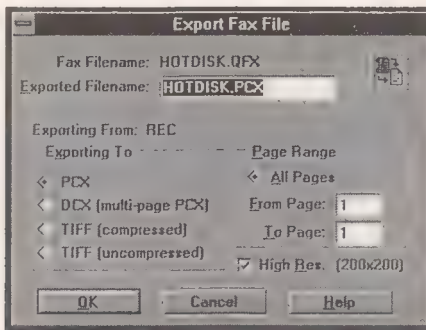
Faxes that get sent out are also graphics (your text documents are converted into a “picture” of the text, so to speak), so you can convert graphic files to fax easily. Graphics conversions of faxes can be completed with the **Convert Documents** command, contained in the **Fax** menu, which presents the sub-menus **Export from Fax** and **Import to Fax**.

Exporting a fax into a graphic file

The **Export** command allows you to convert a fax file (.QFX or .REC file formats) into a Paintbrush file (.PCX or .DCX) or one of two TIFF (.TIF) formats: compressed or uncompressed. These formats can be imported into most Windows and paint applications; in general, simple Paint programs tend to use PCX files, while higher end graphics programs work better with TIFF files.

To convert a fax file, choose **Export**, which calls up the **Export File** dialog box. Select the appropriate directory in the **Directories** list box and select the fax file you want to convert in the **Files** list box, clicking **OK** when highlighted.

Selecting a file calls up the **Export Fax File** dialog box, which controls the aspects of the graphic file the fax is being converted into. The filename of the fax can be changed in the **Exported Filename** field. The file format (and the three letter file extension for the new file) is controlled with the **Exporting To** radio buttons; simply choose a file format by clicking on it. Converting specific pages of multipage faxes can be controlled by entering a specific range of pages in the **Page Range** area, and the resolution can be manually changed by checking the **High Resolution** checkbox.



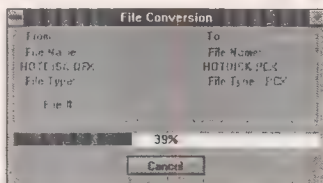
Clicking **OK** will start the conversion, and a status bar will inform you of the progress of the conversion. The resulting graphic file will be located in the same directory as the fax file from which it was created.

Importing a graphic into a fax

Ordinarily, graphics can be faxed out by simply printing to the fax/modem with the QuickLink Mobile print driver from the Windows application that created the graphic itself, but graphics can also be converted directly into a fax file from within QuickLink Mobile by choosing **Import to Fax**.

Since several graphic files can be converted at once, the multiple files dialog box **Convert Documents — Import to Fax** is used. Up to 255 files can be converted at once with this dialog box; files are selected just like sending a fax. The graphic formats supported

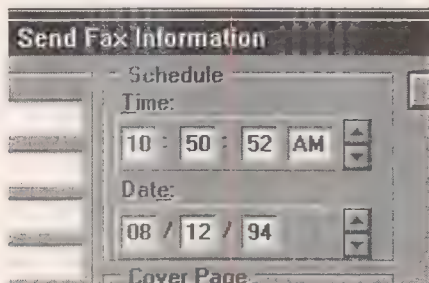
include PC Paintbrush (.PCX), multiple page Paintbrush (.DCX), TIFF (.TIF), Windows Bitmap (.BMP), or MacPaint (.MAC). Graphic files convert into .QFX fax files. Files are saved in their original locations.



After selecting the files to send and clicking **OK**, the document conversion window will appear during the conversion process that provides status information on the conversion.

Fax scheduling

When faxing out, there may be occasions when you do not want to fax the document out immediately, perhaps because you know the recipient's fax machine is only on at a certain time of the day, or because you want to fax during the night when telephone rates are lowest. If this is the case, you can schedule the fax to send later.



Scheduling a fax is very simple. Regardless of how you send out a fax, you can schedule an outgoing fax from the **Send Fax Information** dialog box. Within it, in the **Schedule** section, you can set the **Time** and **Date** when you want the fax to send. The document will immediately convert into a QFX file located in the OUTBOX folder, ready to be faxed out at the scheduled time. The date and time on the cover page will be added as the document is actually sent, reflecting the send time, not the convert time. If your computer is not powered on and running Windows at the scheduled time, it will begin the transfer as soon as Windows is launched.

Sending a fax manually

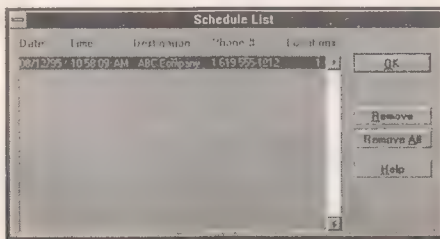
One of the features of a fax machine is its ability to send a fax to someone who is already on the phone with you. A fax machine owner could just reach down and press the Send button to start sending a fax over the line. Traditionally, fax modems have had a problem with this, but QuickLink Mobile allows you to perform an equivalent operation.

To send a fax manually, send a fax as you ordinarily would, right up to the point where a phone number would be entered in the **Send Fax Information** dialog box. Instead of keying in a number, check the **Manual Send** checkbox and click the **Send Fax** button. QuickLink Mobile will then create a cover page and convert the file (if necessary), and prompt you to dial.

Manual receiving works through the Fax Manager; for more information, refer to the Fax Manager section in this chapter.

Viewing the fax schedule

The **View Fax Schedule** command, accessed from the **Fax** menu, allows you to see what fax transmissions are scheduled to be sent and at what date and time. Provided information includes **Date**, **Time**, **Destination**, **Phone Number**, and the number of **Locations** the document will be sent to. Unless you are broadcasting to a group (Refer to next section), this will read 1.



To remove a selected scheduled transmission, select the desired entry from the list and click the **Remove** button. To clear the schedule of all faxes, click **Remove All**.

Sending the same fax to several destinations

The ability to send out the same fax to several destinations is called **broadcasting**, and is fully supported by QuickLink Mobile. The easiest way to broadcast a fax is to simply select more than one destination from the Fax Phone List by highlighting each and clicking the **Mark** button. This will place a small icon next to each entry to indicate that it is on the broadcast list. You may mark as many destinations in the Fax Phone List as you want — clicking **OK** will lock the destinations in. Destinations can be unmarked by highlighting the destination and clicking **Un-Mark**. A fax can be sent to a whole **Group** quickly by selecting a member of a Group and clicking on **Mark Group**. Clicking **Un-Mark Group** will unmark them all. Group broadcasting is the primary reason for using the Group field in the phone list.

When combined with scheduling, it is easy to send literally hundreds of faxes at night; just enter a **Date** and **Time** in the **Send Fax Information** dialog box.

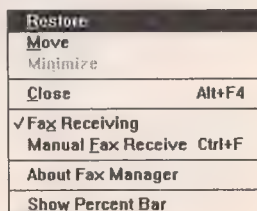
The Fax Manager

The function of the Fax Manager is to monitor the modem and COM port for sending faxes, answering incoming calls, and identifying calls as either fax, voice, or data. When running, the Fax Manager is either a minimized icon at the bottom of the desktop, or maximized and displaying its status. It can be loaded by double-clicking the Fax Manager icon in the Windows Program Manager or by choosing **Load Fax Manager** from the QuickLink Mobile menu.

Fax Manager options

Clicking once on the minimized Fax Manager icon or clicking on the Control box in the upper left corner of the maximized Fax Manager window will pull down the Fax Manager Control menu. It is from this menu that the Fax Manager can be configured.

Fax Receiving is a toggled option, which means that the Fax Manager's



ability to receive faxes is enabled when this option has a checkmark next to it. This option is toggled on and off by selecting it from the Control menu. When Fax Receiving is not checked, the Fax Manager releases control of the COM port and modem, so other communication programs can have access to your modem. If you have an auto-dialer, for example, and it is not working while the Fax Manager is loaded, disable Fax Receiving. Clicking on the minimized Fax Manager with the **right mouse button** also toggles Fax Receiving on and off. When disabled, the small phone on the icon will disappear. This command can also be set from the **Fax** menu within the QuickLink Mobile main application.

Choosing **Manual Fax Receive** forces the Fax Manager to pick up the phone line and start broadcasting “receive fax” tones, which will initiate a fax receive. This feature is useful for occasions where you are already speaking to someone on the telephone and they press the send button on their fax machine to send a fax. Many fax-back services will not work until the Manual Fax Receive command is used. This command can also be invoked from the **Fax** menu within the QuickLink Mobile main application. Not all modems support this option.

The bottom option on the menu toggles between **Show ModemMonitor** and **Show Percent Bar**. The percent bar is a horizontal bar chart that displays the progress as faxes are transmitted. While maximized, you can toggle between the two options by clicking on the status bar or ModemMonitor with your cursor. For more information on the ModemMonitor, refer to Chapter 5.

Fax setup options

The commands and options that customize your faxing features and abilities are accessible under the **Setup** menu are covered in this section.

The maximum baud rate for fax sending and receiving is 14,400bps, and QuickLink Mobile is set to default at this speed. This speed may be lowered by the user, if a different baud rate is desired, in the Send Fax Setup or Receive Fax Setup screens.

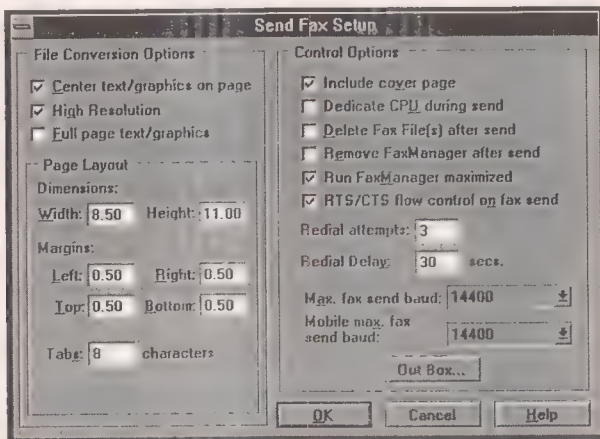
Send fax setup

The **Send Fax Setup** dialog box allows you to define standard information used during fax transmissions. The Send Fax Setup

dialog box contains two sections; **Conversion Options** and **Control Options**.

File Conversion Options

File Conversion Options define how a fax document will appear when it is transmitted to a remote fax only when the file is converted within QuickLink Mobile. Most of these settings do not apply when converting faxes using the Print Driver. The first check box tells QuickLink Mobile to **Center the Text or Graphic** on the fax page vertically when converting. The second option is to allow you to change between **Normal Resolution** and **Fine/High Resolution** fax modes. Normal is the default resolution when this option is not selected. With normal resolution, QuickLink Mobile doubles the scaling on the vertical axis to allow for the differing resolution between the computer graphics standards and fax standards. This scaling is not needed for fine/high resolution. At document conversion time, QuickLink Mobile will look to see which resolution has been selected and perform any scaling necessary.



The next check box in this section, **Full Page Text/Graphics**, instructs QuickLink Mobile to force the page length specified in page layout, even if this results in blank space on a page. Otherwise, it will be the length of the text you are sending.

The **Page Layout** settings allow you to specify the page size and margin and tab settings when converting text files in the QuickLink Mobile main application. These options are used at fax conversion time.

Control Options

The second section of the Send Fax Setup dialog box provides fax transmission control options. The first check box, **Include Cover Page**, provides you with the option to include a cover page with each fax transmission. Failure to select this option means that you will not send a cover page; the default is On.

The **Dedicate CPU during send** checkbox tells QuickLink Mobile to force the sending of fax transmissions to the foreground and in doing so dedicate your computer until the completion of the transmission. Any applications running in the foreground at the time a fax transmission occurs would be temporarily halted until the completion of the send. The default for this option is off. You may find that it is necessary to turn this option on if you are running disk access intensive applications in the foreground.

The **Delete Fax Files after send** checkbox instructs QuickLink Mobile to delete the .QFX file after successful transmission. This can save a good deal of disk space.

The next two selections deal with Fax Manager. **Remove Fax Manager after send** tells QuickLink Mobile to remove the Fax Manager from memory after sending a fax document. The second option is **Run Fax Manager maximized**.

RTS/CTS flow control on fax send lets your fax/modem use its built in flow control during a fax transmission. If your fax modem does not support this type of flow control and you are unable to send faxes, uncheck this option. The default is on.

The **Redial Attempts** field allows you to specify how many times to redial a busy fax number before logging it as busy in the Send Fax Log. The **Redial Delay** field specifies the number of seconds to wait before attempting to redial a busy fax number. The **Maximum fax send baud rate** menu instructs QuickLink Mobile on the maximum speed to use when sending a fax.

The **Out Box** button allows you to specify the directory into which QuickLink Mobile stores fax documents for sending during a schedule. The default directory is called \OUTBOX in the \QLMOBILE directory.

Clicking **OK** saves these settings and closes the dialog box, **Cancel** will close the dialog box and ignore the new settings.

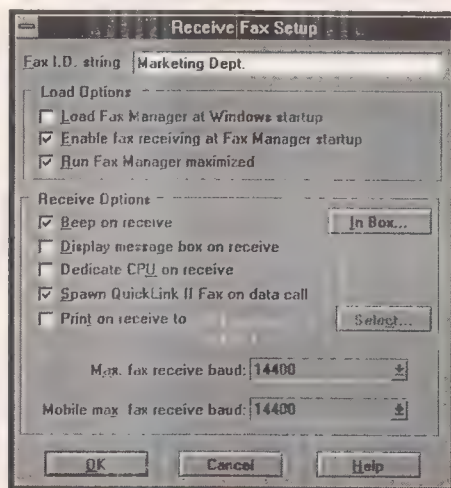
Receive fax setup

The Receive Fax Setup dialog box allows you to define standard information to be used during the receiving of fax transmissions.

The **Fax ID string** field allows you to specify your Fax ID. This string is limited to 19 characters in length. The Fax ID is an identifier to the remote fax machine or fax/modem, and often appears in the sending fax machine's status window. Common ID's include telephone numbers, names, and business names. Note that some older fax machines must sense a Fax ID in all upper case letters. See the Troubleshooting Appendix for more information.

Fax Manager load options

This section of Receive Fax Setup provides special control over the loading and unloading of the Fax Manager. The first option specifies that **Fax Manager be loaded at Windows startup** time. The second option **Enables the Fax Manager to receive faxes**. The final option instructs **Fax Manager to run maximized**. If the Fax Manager is not loaded and enabled you cannot receive an incoming fax.



Receive Options

These options tell the Fax Manager what actions to take when a fax is received. Checking **Beep on receive** will cause a beep to sound when a fax is received. The second option will **Display a**

message box when a fax is received. The **Dedicate CPU on receive** check box tells the Fax Manager to force the receiving of fax transmissions to the foreground and to dedicate your computer until the completion of the transmission. If this option is selected, any applications running in the foreground at the time an incoming fax transmission occurs will be temporarily halted until the completion of the receive. The default for this option is off. The **Spawn QuickLink Mobile** option instructs Fax Manager to automatically start QuickLink Mobile if it is not already running when a data call is detected.

The final option instructs Fax Manager to automatically **Print on receive** to the printer selected after the receipt of an incoming fax. Clicking the **Select** button allows you to choose a printer.

The **In Box** button allows you to change the directory in which your incoming fax messages will be saved. This setting defaults to the \INBOX sub-directory under the \QLMOBILE directory.

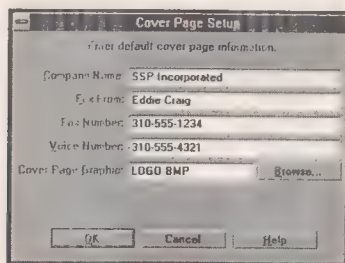
Clicking the **OK** button will accept the entries and remove the dialog box from the screen. The **Cancel** button will disregard any changes and remove the dialog box. The **Help** button will cause the Help Window to be displayed.

Cover page setup

The Cover Page Setup dialog box provides you with text boxes to be used for entering information about you and your company for the fax page headers and fax cover page.

Each fax page sent with QuickLink Mobile (excluding the cover page) will include a page header with the Company name, date, time and page # of the fax, assuming that information has been entered in the **Company Name** text box.

QuickLink Mobile will automatically create and send a cover page at the front of each fax transmission if the **Include Cover Page** option is checked on the Send Fax Setup dialog box. The **Company Name** is also placed at the top of the cover page and the **Fax From** name and Phone # shown on the cover page default to the entries in the **From** and **Fax #** text boxes. The **Voice** contact number is also included on the cover page.



If you wish to include a **Cover Page Graphic** such as a company logo, enter its complete file name, with path or click the **Browse** button. A file selection box will appear asking you for the name of the graphic logo or image file. This file can be either a black and white TIF or PCX file or Monochrome Bitmap file (BMP) with a resolution no greater than 200 DPI. Once you select the file, the name will appear next to the Cover Page Graphic field. When you press **OK**, a conversion box will appear while the selected file is converted to a form usable as your cover page graphic. Once this is done, the graphic will appear at the top of each cover page you fax out.

Select the **OK** button to accept any changes and remove the dialog box. Clicking the **Cancel** button will not save any changes made, and remove the dialog box from the screen.

Chapter 5

DataComm Overview

Chapter 5 describes how to call another modem or BBS for a Data Communications connection and how to **upload** (send) and **download** (receive) files to and from remote systems. The commands used for data communications are in the **Connect** menu. Topics include:

- Calling a BBS (Bulletin Board System) or other modem
- How to use the Data Phone Book
- Uploading a file
- Downloading a file
- How to capture the text of an online session to a text file on disk
- How to paste the Clipboard's contents to the host computer
- How to clear the screen
- How to answer a Data call
- How to emulate modem status lights with the ModemMonitor
- How to free the COM port for other Windows programs
- A brief description of the transfer **protocols** available

Chapter 5 also explains the configurable settings under the **Setup** menu for data communications.

Originating a data call (dialing out)

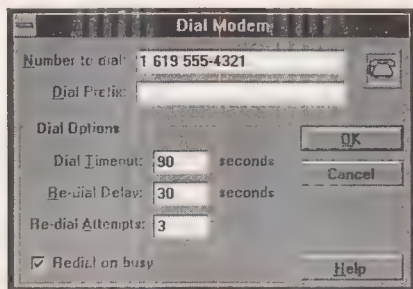
There are two ways to dial out for a Data Comm connection. The first method is a quick **Dial**. The second method of dialing out is by accessing the Data Phone List.

Quickly dialing a number

The great majority of data communications sessions will begin with you dialing out to another modem, BBS, or online service. The quickest way to do this is by simply dialing the modem with the **Dial** command from the **Connect** menu or with the **Dial** button on the Button Bar, which brings up the **Dial Modem** dialog box. From this box, the



telephone number can be entered in to the **Number to dial** field and then dialed. If you would like the modem to redial if it encounters a BUSY signal, check the **Redial on busy** checkbox. Clicking **OK** starts dialing.



The **Dial Prefix** is used for dialing any digits before the actual telephone number is dialed, and may be set for all calls from the **Modem Setup** dialog box, accessible from the **Setup** menu (discussed later this Chapter). The Dial Prefix is commonly used in office situations where you need to dial a 9 to get an outside line or dialtone, for example. In such a case, entering a 9, followed by a **comma** (,) would first dial a 9, then pause 2 seconds (a comma represents a 2 second pause), then continue dialing the telephone number. The **Redial Timeout** tells QuickLink Mobile how long to wait for a CONNECT before aborting.

***Note:** If the S7 register is set lower than the Redial Timeout, the S7 register time will be used.*

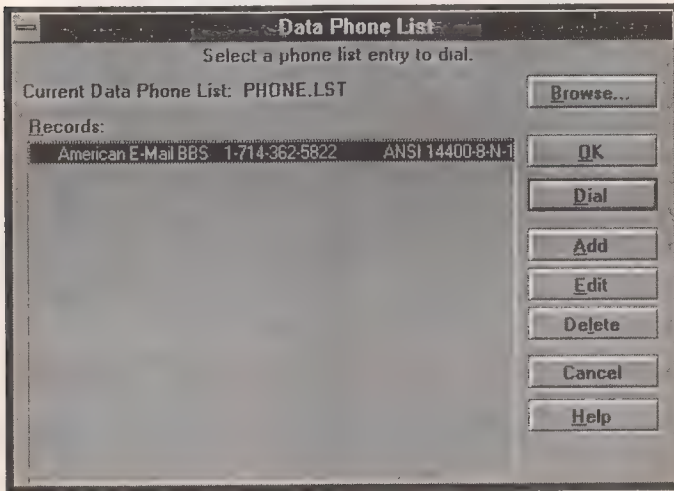
Using the Data Phone List

Choosing **Data Phone List** from the **Connect** menu brings up the **Data Phone List** dialog box, allowing access to a datacom telephone book of all your frequently dialed data numbers — clicking **Data List** on the Button Bar accesses the phone book too. You'll find that it is accessed almost exactly like the Fax Phone List, and can be printed the same way (choosing **Print** from the **File** menu and selecting **Data Phone List**).



Choose it now, and you will find that there is already an entry in the list: American E-Mail. American E-Mail is Smith Micro Software's BBS; you are invited to use this system to test the data portion of QuickLink Mobile. There is no charge for using our system, other than the long distance charges from your telephone

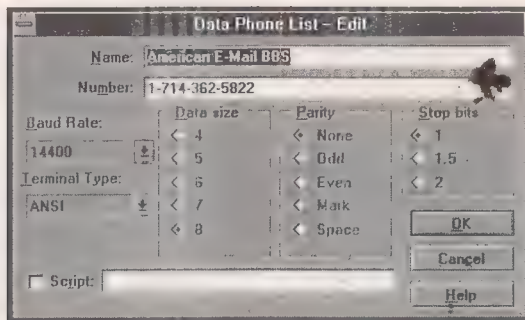
company for dialing the 714 area code. (The 714 area code is located in Southern California). To dial any number as it appears in the Data Phone List, highlight the entry by clicking on it and click on the **Dial** button. The **Add** and **Delete** buttons allow you to respectively add and delete Data Phone List entries.



To edit an entry in the Data Phone List, highlight the entry and click the **Edit Button**.

Example: Highlight the American E-Mail entry and click the **Edit** button now. This brings up the **Data Phone List - Edit** dialog box, where every aspect of an entry can be changed.

To change the **Name** or **Number** of an entry, just click in the appropriate field and type in the new entry. Notice that spaces and dashes are acceptable in the telephone number and do not affect the way a number is dialed. If you are calling from the 714 area code, be sure to delete the 1-714 from the **Number** field.



The other fields deal with the more technical aspects of the connection, such as the **Baud Rate**, **Terminal Type**, and **Line settings**. The baud rate and terminal type fields are pull down menus and the line settings are radio buttons. While there is no set standard terminal type and line setting combination for every modem connection, there are some guidelines to follow which may be helpful.

- Set the **Baud Rate** to the highest your modem will support, or to 2400 if you are getting poor connections. When you dial the other modem, the two modems will establish the highest connection speed possible automatically when the **Autobaud** feature is turned on (The default setting for Autobaud is **On**. Refer to later this Chapter).
- Small systems (BBS's) tend to use the ANSI terminal type with 8 data bits, no parity, and one stop bit (8-N-1 for short).
- Large installations (such as mainframes and online services like GENie and CompuServe) tend to use the VT100 terminal type with 7 data bits, even parity, and 1 stop bit (summarized by 7-E-1).
- Two people connecting their PC's together via modem should try the TTY terminal type with 8-N-1. You may also need to turn on Local Echo and both CR/LF checkboxes in the Terminal Options dialog box, covered later this Chapter.

Other than the area code in the telephone number, all the settings for the American E-Mail entry are correct. Click **OK** to leave the **Edit** dialog box and click **Dial** to dial our BBS.

Once connected to our American E-Mail system, follow the prompts to create a new user account. You will be prompted at every step and must create a password of your own choosing to enter the system for future online sessions. When connected to our system, you may upload and download public domain and utility files and programs, visit the Online Software Store, or get online technical support. All selections are menu driven; when in doubt enter a Question Mark (?) for help. To disconnect from our (or any) system, pull down the **Connect** menu and choose **Hangup**.

File transfers

Unlike faxing, file transfers do not happen automatically; there is a good deal of preparation to consider. Fortunately, QuickLink Mobile makes the procedure as intuitive as possible.

The concept of file transfers

Before getting into the specifics of file transfers, an outline of the concept of uploading and downloading should be very helpful to those users who have never transferred files before. The general process is as follows:

1. Connect with the other modem or system (covered in the previous sections). Make sure that you can both write to the screen so the other end can understand you and vice versa.
2. Tell the other side that you are interested in file transfers.
3. Tell the other side what file(s) you want or what file(s) they should expect from you.
4. Tell the other side what transfer protocol to use (for a discussion on the differences between the protocols, refer to the next section).
5. When the other side indicates they are ready, pull down the **File** menu and choose **Send File** or **Receive File**, and choose the protocol you told the other side to expect.

File		
Send File	PgUp	ASCII...
Receive File	PgDn	Kermit...
Capture Text...	Alt+T	Super Kermit...
Print...	Ctrl+P	Xmodem...
Printer Setup...		Xmodem CRC...
Exit	Alt+F4	Xmodem 1K...
		Ymodem...
		Ymodem-G...
		Zmodem...
		CompuServe B/B+...

6. If sending, choose the file(s) you want to send, click **OK** and the transfer begins. If receiving using Xmodem (of any type) or ASCII protocols, type the name of the file you want to receive and Click **OK**; for all other protocols just click **OK** and the transfer begins.

With this in mind, QuickLink Mobile file transfers will make a lot more sense.

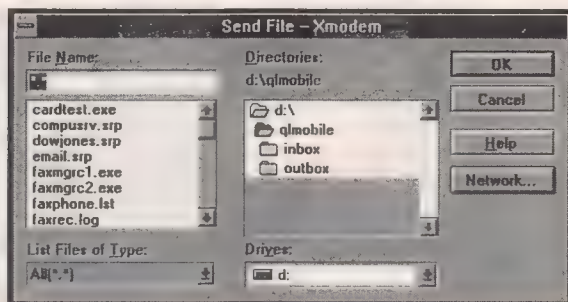
Selecting one file to upload

The ASCII, CompuServe B/B+, Xmodem, Xmodem CRC, and Xmodem 1K protocols let you upload only one file per transmission. When you select sending by one of these protocols, the Send Single File dialog box appears with the selected protocol as the title.

To send a file, enter the complete file name and path of the file you want to upload. For example, to upload the file SALARY.DOC from the WINWORD subdirectory on your computer's C drive, type: C:\WINWORD\SALARY.DOC and click **OK**.

OR

Use the **Directories** list box to scroll through the subdirectories on your PC's hard drive and select the file from the **Files** list box, clicking **OK** when highlighted. This starts the transfer and calls up the **Upload Status** dialog box.



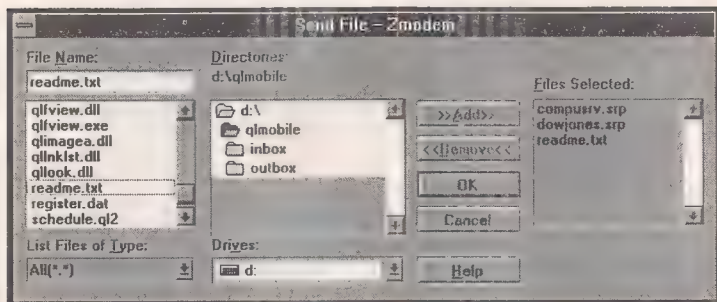
Selecting multiple files to upload

The Kermit/SuperKermit, Ymodem, Ymodem-G, and Zmodem protocols let you upload more than one file during the same transmission. In addition to sending a batch of files, one file may also be sent by itself. The main advantage of sending a single file with one of these protocols is that the receiving end need not type in a file name, as the file name is included with the transfer. If you select one of these protocols, the Send Multiple Files dialog box appears with the selected protocol as the title. This dialog box works similarly to the Send Fax dialog box.

If you want to upload files from the current path, shown at the top of the **Directories** list box, enter the file name in the **File Name** field and click **Add**. Otherwise, enter the complete path of the file you want to upload. For example, to upload the file SALARY.DOC from the WINWORD subdirectory on your computer's C drive, type: C:\WINWORD\SALARY.DOC and click **OK**.

OR

Use the **Directories** list box to scroll through the subdirectories on your PC's hard drive and select the files from the **Files Available** list box, clicking **ADD** to add the file to the **Files Selected** list box. Repeat this for every file you want to add to the batch send. If you change your mind about sending one of the files, highlight it in the **Files Selected** list box and click **Remove**. The selected file is removed from the list box and will not be sent. When the list of files selected is complete, click the **OK** button, which begins the transfer and calls up the **Upload Status** dialog box.



Upload status

The **Upload Status** dialog box keeps you informed of the status of the upload. It displays the following information:

- **Protocol** displays which protocol is being used for the current transmission.
- **File Name** displays the name of the current file being transferred.
- **File Size** displays the size of the current file being transferred.
- **Bytes Sent** displays the number of bytes sent.
- **Status** shows the current status of the upload. For example, **Sending data** appears when data is being sent to the remote system.

The status bar at the bottom of the dialog box displays the progress of the upload. The whole transfer can be stopped by clicking the **Cancel** button. The **Minimize** button will reduce QuickLink Mobile to an icon at the bottom of the screen while the transfer is taking place, so you can send files in the background while working with other programs.

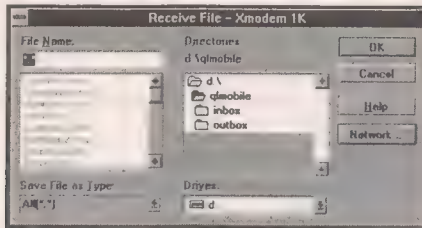
When the transfer is finished, a dialog box will appear to alert you, and the computer will beep. Clicking **OK** removes the dialog box. If QuickLink Mobile is still minimized, double clicking on its icon will return you to the terminal window to resume communications.

Downloading files

Receiving files works much like sending a file and actually involves less steps. The biggest issue is determining what protocol is being used and how many files are being sent.

Receiving one file

The ASCII, CompuServe B/B+, Xmodem, Xmodem CRC, and Xmodem 1K protocols let you download only one file per transmission. When you choose to receive using one of these protocols, the Receive Single File dialog box appears with the selected protocol as the title.



At this point, QuickLink Mobile needs a file name to save the file under. To receive the file, enter the desired path where you want the file being downloaded to be stored. For example, to download the file PICTURE.BMP to the WINDOWS subdirectory on your computer's C drive, type: **C:\WINDOWS\PICTURE.BMP** and click **OK**.

OR

Use the **Directories** list box to scroll through the subdirectories on your PC's hard drive and type in the file name in the **File Name** field, clicking **OK** when finished. This starts the transfer and calls up the **Download Status** dialog box.

Receiving a batch of files

The Kermit/SuperKermit, Ymodem, Ymodem-G, and Zmodem protocols let you download more than one file during the same transmission. In addition to receiving a batch of files, one file may also be received by itself. The main advantage of receiving a single file with one of these protocols is that the file name is included with the transfer using these protocols, so it is impossible for files to be named incorrectly.

When you use one of these protocols, the **Receive Multiple Files** dialog box appears with the selected protocol as the title. This dialog box works similarly with the **Receive Single Files** dialog box, except that you cannot enter a file name. Another directory can be selected with the **Directories** list box, and clicking **OK** initiates the transfer and calls up the **Download Status** dialog box.

Download status

The **Download Status** dialog box keeps you informed of the status of the download. It displays the following information:

- **Protocol** displays which protocol is being used for the current transmission.
- **File Name** displays the name of the current file being transferred.
- **File Size** displays the size of the current file being transferred. (Batch protocol only)
- **Bytes Received** displays the number of bytes sent
- **Status** shows the current status of the upload. For example, **Receiving data** appears when data is being received from the remote system.

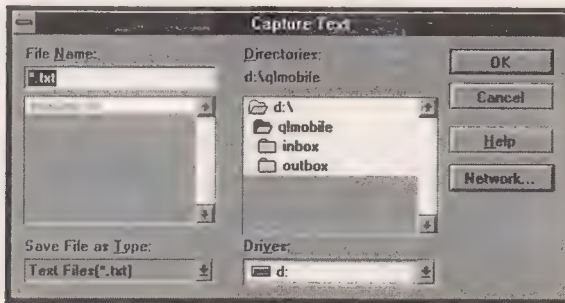
The status bar at the bottom of the dialog box displays the progress of the download (Batch protocol only). The whole transfer may be stopped by clicking the **Cancel** button. The **Minimize** button will reduce QuickLink Mobile to an icon at the bottom of the screen while the transfer is still taking place, so you can receive files in the background and work with other programs.

When the transfer is finished, a dialog box will appear to alert you, and the computer will beep. Clicking **OK** removes the dialog box. If QuickLink Mobile is still minimized, double clicking on its icon will return you to the terminal window to resume communications.

Capture text

If you know in advance that you want to capture the text that appears on screen, QuickLink Mobile can be set to make a copy of everything you see and save it into a text file on your computer's hard disk.

To capture text, pull down the **File** menu and choose **Capture Text**, which calls up the **Capture Text** dialog box. The Capture Text dialog box works just like the Receive Single File dialog box. Type a name for the file to save the captured text in the **File Name** field and click **OK** to begin capturing. You can select another directory with the **Directories** list box.



You can double-check that QuickLink Mobile is indeed capturing text by pulling down the **File** menu; when there is a checkmark next to **Capture Text**, text is being captured. Choosing **Capture Text** again will stop the capture and close the file, causing the checkmark to disappear. **Capture Text** has nothing to do with receiving faxes or faxing.

Retransmitting what you see

Choosing **Paste to Host** will transmit the contents of the Windows Clipboard out the modem or fax/modem to the remote computer or terminal. This function will only operate if the contents of the clipboard are in text format.

Clearing the screen

Choosing **Clear Screen** from the **Edit** menu will clear the terminal window of its text. This command will not affect the connection to the remote system.

Answering a data call

Answering a call is almost totally automatic and handled by the Fax Manager. The Fax Manager's default settings will allow it to determine whether the incoming call is fax, data, or voice. If it is a data call, the Fax Manager will seamlessly pass the call into the QuickLink Mobile telecommunications mode, even automatically launching the main application and waiting for your input in the terminal window.

If the **Answer Mode** is set to either **Data Only** or **Auto Detect** from the **Modem Setup** dialog box, a data call can also be answered when you are in the main terminal screen if the fax manager is not running. Typing **ATA** and then the Enter key in the terminal window will also force the modem to pick up the line and answer the call.

The S0 register can be set to the number of rings you want the modem to answer the phone, but this will conflict with the Fax Manager's operation and bypass the **Number of Rings to Answer Phone** field in the **Modem Setup** dialog box. You are strongly urged not to change the S0 register in the Initialization string. If you do, be sure to change it back to S0=0 to receive faxes.

Using the ModemMonitor

The absence of status lights on internal modems or fax/modems can sometimes leave you in the dark about what your fax/modem is actually doing when online. For example, if a connection accidentally terminates when online, someone with an external modem can simply look at the status lights on the modem itself and determine what's happening while an internal modem owner may be left in the dark.

When activated, the ModemMonitor creates a set of modem status lights on screen in their own window. Since the ModemMonitor is actually a part of the Fax Manager, it must be running and maximized.

Displaying the ModemMonitor

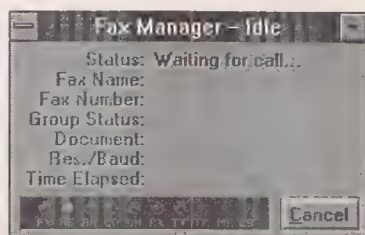
Follow these steps to display the ModemMonitor:

1. Load the Fax Manager. This can be done by choosing **Load Fax Manager** from the **Fax** menu or by double-clicking it from the Windows Program Manager.
2. Maximize the Fax Manager, if it's displayed as an icon. Double-clicking on it while at the bottom of the desktop will maximize the Fax Manager.
3. If necessary, display the ModemMonitor by choosing **Show ModemMonitor** from the Fax Manager Control menu, or click on the empty status bar.

The status lights

There are 10 modem status lights visible in the ModemMonitor. They indicate the following when on (red):

FX:	Fax Connection	The incoming or outgoing call is a fax. This light is blue.
HS:	High Speed	The established connection is 9600 baud or higher.
AA:	Auto Answer	Flashes whenever a RING is detected by the modem
CD:	Carrier Detect	The modem detects a remote carrier
OH:	Off Hook	The modem has picked up the telephone line
RX:	Receive Data	The modem is receiving characters or data
TX:	Transmit Data	The modem is transmitting characters or data out
TR:	Terminal Ready	The modem/computer is ready to send and receive commands
MR:	Modem Ready	The modem is powered up
CS:	Clear to Send	The modem is ready to receive more data



Freeing the COM port

The Data Comm portion of QuickLink Mobile has control of the COM port (and your modem or fax/modem) whenever the terminal window is **On-Line**, even if behind other windows or minimized. On some systems, this can interfere with auto-dialing and other modem programs. Therefore, QuickLink Mobile can release the COM port temporarily for other programs by performing one of the following actions:



- Click the **Off-Line** button on the Button Bar. This removes the terminal window and releases the COM port. Click **On-Line** to restore the terminal window.
- Choose **Off-Line** from the **Connect** menu. This also removes the terminal window and releases the COM port. Choose **On-Line** from the **Connect** menu restore the terminal window.
- Close the QuickLink Mobile main application by selecting Exit from the **File** menu.

If the Fax Manager is running, it may also have access to the COM port, interfering with other modem programs. Refer to Chapter 4 for more information.

Protocols

This section describes the various protocols that QuickLink Mobile provides for uploading and downloading data files.

ASCII

The **ASCII** protocol (pronounced asky) is a seven-bit protocol that consists of the 128 characters that make up the upper- and lower-case alphabet, numbers, characters available on a standard keyboard, and certain special control characters.

The ASCII protocol has no error-checking capabilities. ASCII protocol uses XON/XOFF handshaking and requires XON/XOFF flow control to be enabled at both communicating devices. By default, QuickLink Mobile has XON/XOFF flow control disabled. When the computer receiving data needs to stop the data transmission temporarily to process the received data, it sends a Ctrl-S (^S) character to stop the sending computer from sending data. When the receiving computer has processed the received data and is ready to accept more, it sends the sending computer a Ctrl-Q (^Q) character to resume data transmission.

Since there are no additional error checking characters sent during the transmission, ASCII is good for sending a burst transmission of raw text/data uninterrupted.

CompuServe B/B+

The CompuServe B/B+ protocol should be used when communicating with CompuServe.

Kermit/SuperKermit

QuickLink Mobile provides both the standard Kermit as well as the powerful Super Kermit (Windowed Kermit) protocol. It was developed to meet the needs for file transfer between a number of different types of computers, including mainframes, mini computers and personal computers. Unlike Xmodem and Ymodem, Kermit uses variable packet sizes, with a maximum size of 1024 bytes. Like Ymodem, Kermit provides for batch file transfers. SuperKermit is especially useful when transferring data over data networks such as Telenet or Tymnet. These networks have long communications delays that can significantly degrade the performance of file transfers. For each packet transmitted, two communications delays will be interjected into the transfer. Super Kermit addresses this problem by sending multiple packets at one time, also known as a transmission window. All error correction is still performed, however the receiving computer

does not acknowledge the receipt of the data or asks for re-transmission of any bad packets until all packets in the window have been received. This process results in a dramatic reduction in the delay time.

Of the public services, only CompuServe supports Kermit. If you select Super Kermit and the remote computer only supports Kermit, QuickLink Mobile will drop back to Kermit.

Xmodem

QuickLink Mobile provides three different Xmodem protocols: Xmodem 1K, Xmodem CRC and the original Xmodem (also called Modem7 or Xmodem Checksum or Christenson).

In order for Xmodem to work, the data format must be set to 8 data bits, 1 stop bit, and no parity. If you did not begin the communications session with this setting, QuickLink Mobile will automatically correct this for you. Xmodem Checksum sends the data in packets of 128 bytes. Therefore a 1K file (1,024 bytes) would be transmitted in 8 data packets. A simple data checksum is added to each packet and is checked on the receiving end of the transfer. If the receiving Xmodem detects a bad packet, it can request the packet again, yielding a good level of error recovery.

Xmodem CRC

In an effort to guard against undetected errors the original Xmodem was enhanced by replacing the 8 bit checksum with a 16 bit Cyclic Redundancy Check (CRC). This change provides a 99.9984% assurance of detecting any transmission errors. With the checksum method, it is possible for 1 out of 256 bad packets to have a valid checksum, and thus go undetected. With the CRC method only 1 out of 700 billion bad packets will generate a valid CRC. The CRC method also transmits 128 byte blocks or packets of data. If you select Xmodem CRC and the other system does not support it, QuickLink Mobile will automatically switch over to the standard Xmodem; to the user both methods appear to operate identically.

Xmodem 1K

This method of Xmodem data transfer replaces the original 128 byte packets with packets of 1,024 bytes when possible. Assuming

that no transmission errors are detected, this method of Xmodem data transfer will enlarge the packet size to 1K and maintain that packet size for as long as possible. Enlarging the packet size will improve the speed of the file transfer. If you attempt to receive a file using Xmodem 1K and the other side only supports Xmodem CRC, QuickLink Mobile will fall back to Xmodem CRC.

Ymodem

The Ymodem protocol (also called Ymodem Batch, Ymodem 1K, and Ymodem CRC) is very similar to the Xmodem 1K, with two major differences — with Ymodem you can automatically receive or send multiple files in one session, and file names are included with the transfer. In general, Ymodem is very fast and very safe and preferable to Xmodem, even for single files.

Ymodem-G

Ymodem-G is a file transfer protocol that provides the same error checking as Ymodem, but it will not perform any error checking. Therefore, Ymodem requires an error-correcting modem or fax/modem with either MNP 2-4 and/or V.42. If both ends of the transmission meet the requirements, transfers will be exceptionally fast.

Zmodem

The Zmodem protocol is a new and popular protocol that lets you send multiple files in one transfer. Features include automatic downloading and the ability to send file names, sizes, and creation dates of each file. Also, if a data transmission is interrupted midway, Zmodem lets you resume the data transmission from the point where it left off.

The size of the data block varies with Zmodem, depending on the condition of the connection of the telephone line between the communicating devices. Moreover, both 32-bit and 16-bit CRC error-checking are available with Zmodem.

Zmodem is not always identically implemented at various sites. If you are having problems with the Zmodem protocol, try Ymodem or Xmodem.

Data communications setup options

In addition to permitting QuickLink Mobile to communicate with such a wide variety of standard data communication configurations, the **Setup** menu contains the options to customize QuickLink Mobile to your system.

Line settings

Choosing **Line Settings** from the **Setup** menu causes the **Line Settings** dialog box to appear. This dialog box allows you to select the line speed, data format and flow control to be used during communications. These settings are independent of the settings in the **Data Phone List**, but the same general guidelines for setting them apply. (Refer to the Data Phone List section for more information.) Clicking on the **Cancel** button will exit without implementing any changes. Clicking on the **OK** button will remove the dialog box and implement all option changes.

Baud rate

Possible baud rate settings may vary from 110 baud to 115,200 baud. The default speed is 19,200 baud. Refer to your modem manual for the maximum baud rate supported by your modem.

Data bits

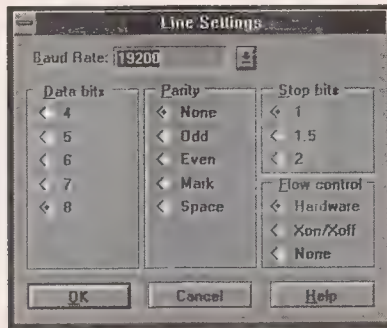
The allowable options are 4, 5, 6, 7 or 8 data bits — the default setting is 8 data bits.

Parity

Parity may be Odd, Even, Mark, Space or None. None only applies only when 8 data bits are selected. The default setting is None.

Stop bits

The allowable settings are 1, 1.5 or 2. The default setting is 1 stop bit.



Flow control

Flow Control is the process of telling each computer to stop sending data and starting it again. This provides time to process the data received. Flow control is usually not needed for 2400 baud data connections.

Xon/Xoff is a software flow control that involves the sending of special control codes as part of the data. It is usually necessary for ASCII file transfers. Hardware flow control (RTS/CTS) is implemented in both software and the modem hardware, therefore your modem must support the RTS/CTS standard for this method to be used. The RTS/CTS method is more reliable and is necessary for use with modems equipped with V.42/V.42bis and MNP Level 5. The default setting is RTS/CTS.

Modem setup - Land connection

When installed, QuickLink Mobile defaults to Land connection. The Modem Setup dialog box provides you with the ability to define the modem **Initialization**, **Dial**, and **Hang up** strings. This dialog box also allows you to set the **COM** port that the modem will use and define key information to be used by the Fax Manager for answering incoming calls.

When in Land connection mode, QuickLink Mobile automatically defaults to the standard Initialization and Dial strings.

Clicking the **Cancel** button will exit the dialog box without implementing any changes. The **Default** button resets the settings to factory defaults. Clicking the **OK** button implements all changes and removes the dialog box from the screen. The **Hardware** button allows you to change the class of Fax Manager

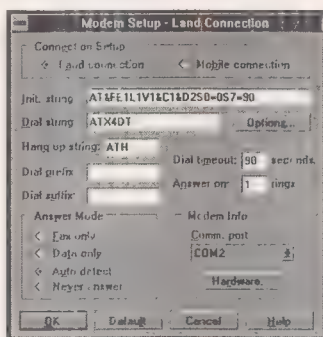
used by QuickLink Mobile. It is not normally necessary to alter this setting.

Initialization string

The modem initialization string is the command set that QuickLink Mobile issues to the modem when the application is first started. The default string works with most modems and fax/modems. If your modem has special features or commands, the AT commands needed to enable them are entered here. Check your modem manual for a detailed breakdown of the AT command set. An abbreviated set is listed in Appendix C.

Dial string

The Dial string is the command QuickLink Mobile issues to the modem when instructed to dial a number. This event occurs when dialing from the Data Phone List, using the Dialer, sending a fax, or connecting to either CompuServe, Dow Jones or GENie. Click the **Options** button to automatically change the Dial string for pulse dialing, detecting the dial tone, detecting a BUSY signal, and/or disabling call waiting.



Hangup string

The hangup string is the command QuickLink Mobile issues to the modem when the **Hangup** command is chosen from the **Connect** menu. This string is pre-set to ATH, which is the AT command to hangup the modem.

Dial prefix/suffix

The dial prefix/suffix strings are appended to the beginning and end of the telephone number when dialing. These strings are handy when you need to dial using credit card, or for long distance telephone access, or for dialing a digit to get an outside line. For example, if you need to dial a 9 to dial out of an office

phone system, enter a 9 and a **comma (,)** in the **Dial prefix**. (A comma represents a 2 second pause.)

Answer mode

This entry determines the circumstances under which you want QuickLink Mobile to answer the telephone. **Fax only** tells Fax Manager to process fax calls only and hangup on all others. With **Data only** selected, QuickLink Mobile will handle data calls and hang up on fax or voice calls. **Auto Detect** instructs the Fax Manager to answer all calls. With Auto Detect selected the Fax Manager will receive fax transmissions, transfer data calls automatically to the QuickLink Mobile main application, or display a message that a voice call is waiting and provide a limited amount of time to respond prior to hangup. (Some modems are not capable of Automatically Detecting the line.) If you do not want the phone to be answered, select the **Never Answer** option. Selecting the Never Answer option is similar to setting the number of rings to answer to 0. The default is set to Auto Detect.

Number of rings to answer phone

QuickLink Mobile will pick up the line and answer the phone on the number of rings specified in the **Answer on** field. Setting this number to 0 will keep the Fax Manager from answering calls. Some modems will answer 1 to 2 rings after the number specified due to the hardware. The default is set at 1.

Modem setup - Mobile connection

Although QuickLink Mobile automatically reconfigures the modem for mobile connection default settings, the Modem Setup dialog box provides you with the ability to change the modem **Initialization**, **Dial**, and **Hang up** strings. This dialog box also allows you to set the **COM** port that the modem will use and define key information to be used by the Fax Manager for answering incoming calls.

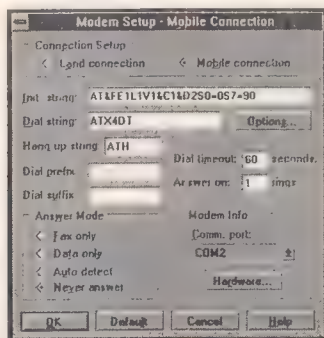
The **Cancel** button allows you to exit the dialog box without using any changes. The **Default** button resets the settings to factory defaults. The **OK** button accepts all changes and removes the dialog box from the screen. The **Hardware** button allows you to change the class of Fax Manager used by QuickLink Mobile. It is not normally necessary to alter this setting.

Initialization string

The modem initialization string is the command set that QuickLink Mobile issues to the modem when the application is first started. The default string for the Mobile connection setup works with most PCMCIA modems and fax/modems. If your modem has special features or commands, the AT commands needed to enable them are entered here. Check your modem manual for a detailed breakdown of the AT command set. An abbreviated set is listed in Appendix C.

Dial string

The Dial string is the command QuickLink Mobile issues to the modem when instructed to dial a number. This event occurs when dialing from the Data Phone List, using the Dialer, sending a fax, or connecting to either CompuServe, Dow Jones or GEnie. Click the **Options** button to automatically change the Dial string for pulse dialing, detecting the dial tone, detecting a BUSY signal, and/or disabling call waiting.



Hangup string

The hangup string is the command QuickLink Mobile issues to the modem when the **Hangup** command is chosen from the **Connect** menu. This string is pre-set to ATH, which is the AT command to hangup the modem.

Dial prefix/suffix

The dial prefix/suffix strings are appended to the beginning and end of the telephone number when dialing. These strings are handy when you need to dial using a credit card, or for long distance telephone access, or for dialing a digit to get an outside line. For example, if you need to dial a 9 to dial out of an office phone system, enter a 9 and a **comma (,)** in the **Dial prefix**. (A comma represents a 2 second pause.)

Answer mode

This entry determines the circumstances under which you want QuickLink Mobile to answer the telephone. **Fax only** tells Fax Manager to process fax calls only and hangup on all others. With **Data only** selected, QuickLink Mobile will handle data calls and hang up on fax or voice calls. **Auto Detect** instructs the Fax Manager to answer all calls. With Auto Detect selected the Fax Manager will receive fax transmissions, transfer data calls automatically to the QuickLink Mobile main application, or display a message that a voice call is waiting and provide a limited amount of time to respond prior to hangup. (Some modems are not capable of Automatically Detecting the line.) If you do not want the phone to be answered, select the **Never Answer** option. Selecting the Never Answer option is similar to setting the number of rings to answer to 0. The default is set to Auto Detect.

Terminal options

The **Terminal Options** dialog box allows you to set the terminal attributes you want QuickLink Mobile to use. A number of check boxes are provided to turn options on or off.

Local echo

The Local echo option tells QuickLink Mobile to display all keyboard entries directly to the terminal window rather than letting the remote computer echo the keystrokes back as is normal. If you cannot see what you type, turn this option on. If characters appear double, (l1iikkee tthhiiss) turn this option off. Some telecom programs call this setting "Duplex/Half-Duplex".

Change CR to CR/LF

These options causes QuickLink Mobile to translate all outgoing and/or incoming Carriage Returns to Carriage Return + Line Feed. If incoming or outgoing lines are overwriting each other, turn the option on.

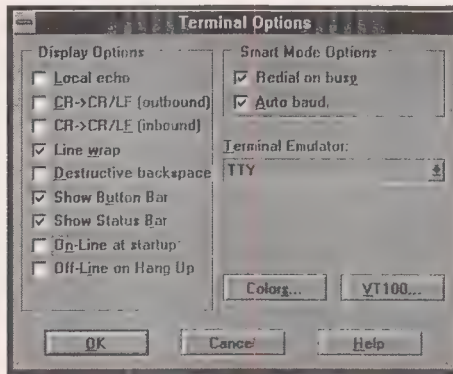
Line wrap

This option issues a carriage return + line feed if more than 80 characters are transmitted on a single line.

Destructive backspace

This option instructs QuickLink Mobile to erase a character when the backspace key is pressed. When this option is not selected, pressing the backspace key will move the cursor back

one character but will not erase the character that may be above the cursor.



Show status bar

This option tells QuickLink Mobile to always display the terminal Status Bar when the program is started. Choosing **Status Bar** from the **Edit** menu only affects the Status Bar for a single session.

Show Button Bar

This option tells QuickLink Mobile to always display the Button Bar when the program is started. Choosing **Button Bar** from the **Edit** menu only affects the Button Bar for a single session.

On-Line at startup

This option opens the terminal window and COM port when the program is started.

Off-Line on hang up

This option ensures QuickLink Mobile closes the COM port when you exit the program.

Smart mode

Selecting **Redial on busy** tells QuickLink Mobile to perform an automatic-redial when your modem detects a busy signal. Selecting **Auto baud** tells QuickLink Mobile to automatically reset the baud rate if the modem answers a call and makes a connection at a rate other than the rate specified at dialing. Smart mode options apply any time QuickLink Mobile dials the modem, such as when using the Dialer Phone List, executing a Script Dial Statement, or connecting to CompuServe, Dow Jones or GEnie. You must also have an AT Command set compatible

modem that detects and displays the connection baud rate. English responses must be set on.

Color setup

The **Color** button provides you with the capability to adjust the terminal screen foreground and background colors, as well as the colors used for blinking text for VT100/VT102 terminal options. All color choices are accessible through the pull down menus.

Terminal Emulation

The **Terminal Emulator** menu allows you to change the emulation by providing you with an emulator list. QuickLink Mobile supports Teletype (TTY), DEC VT102, DEC VT100, DEC VT52 and ANSI terminal emulation. Terminal emulation allows QuickLink Mobile to make your PC look like a specific type of terminal to a remote computer. In performing this task QuickLink Mobile translates the remote computers special instructions for such things as screen cursor positioning, display color and text/graphics display.

VT100 / VT102 setup

The **VT100** button allows for additional settings for the VT100/VT102 emulation modes. By selecting the VT100 Button, the VT100/102 Terminal Setup dialog box will appear.

You should take special care in not changing the default settings unless you are certain that the host application absolutely requires a change. The default settings have been set to the most commonly used values. Altering options such as the Tab Stops may cause host applications to operate improperly on your terminal. The following options are found on the VT100/VT102 Terminal Setup:

New line mode

With this option off, a Return generates a carriage return. A linefeed (LF) moves the cursor to the next line maintaining the current column position. With this option on, a Return generates a carriage return and a linefeed. A linefeed moves the cursor to the left margin of the next line.

Answerback message

The text box contains a 1 to 20 character message that will be transmitted upon computer request or operator command.

Tabs

Up to 10 tab positions may be entered in the tab text box. Each tab position entry must be separated from the next entry by a comma.

Clicking the **OK** button will remove the dialog box from the screen and implement any option changes. Clicking **Cancel** removes the dialog box from the screen but does not use any changes made. .

Refer to Appendix A for additional information on the QuickLink Mobile implementation of the VT100/102 keypad and other special VT100/102 keys. The appendix lists the PC key equivalents established by QuickLink Mobile to emulate the VT100/102 keyboard.

Chapter 6

Automating QuickLink Mobile

QuickLink Mobile has several advanced features which can make your online communications sessions quicker and easier to manage by automating various functions. Chapter 6 describes these features:

- Logging on to online services automatically
- Macro Keys
- Scripts and the scripting language

Online services quick access

QuickLink Mobile can quickly connect you to your accounts on the major online services. Before it can do this, however, you must configure QuickLink Mobile with the proper information. When configured, you can connect to Dow Jones, CompuServe, and GENie with just one mouse click.

Services setup

Services Setup, accessed from the **Setup** menu, allows you to specify account information for the Dow Jones, CompuServe, and GENie online services. Choosing **Services Setup** from the **Setup** menu calls the **Services Setup** dialog box, which is where the account information is keyed into QuickLink Mobile.

Follow the appropriate section(s) for your online service account(s):

CompuServe: If you will be calling CompuServe, use this section to enter your **Account** number and **Password**, and select the public network (**Compunet**, **Telenet**, or **Tymnet**) you want to access by keying in its phone number and clicking the corresponding radio button.

Dow Jones: If you will be calling Dow Jones, use this section to enter your **Password** and select the public network (**Telenet** or **Tymnet**) you want to access and its phone number.

GEnie: If you will be calling GEnie, use this section to enter your **User ID** and **Password**. Do not enter the separating comma. Enter the telephone number needed to connect to GEnie in the **GENienet** field.

The screenshot shows a 'Services Setup' dialog box with the following fields and options:

- Compuserve**
 - Account: [text box]
 - Password: [text box]
 - Network: [dropdown menu with options: Compunet, Telenet, Tymnet]
 - Network Numbers
 - Compunet: [text box]
 - Telenet: [text box with value 555-1112]
 - Tymnet: [text box]
- Dow Jones**
 - Password: [text box]
 - Network: [dropdown menu with options: Telenet, Tymnet]
- GEnie**
 - User I.D.: MACVAC
 - Password: 12345
 - GENienet: [text box]

Buttons at the bottom: OK, Cancel, Help.

Clicking **OK** sets the information.

Connecting to online services

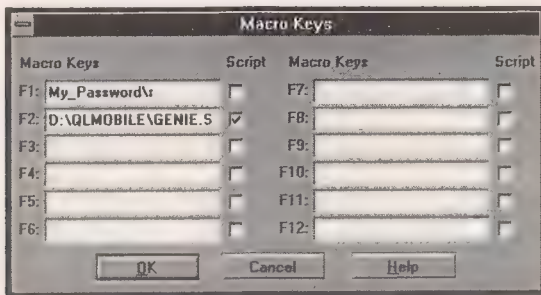
Once the account information is keyed in, simply pulling down the **Connect** menu and selecting the appropriate Online Service will automatically dial your modem, log you in, and enter your password.

Macro keys

The Macro Key function allows you to define a custom meaning or sequence of keystrokes to the function keys, F1 through F12. These Macro Keys can cause a user defined literal string (series of characters) to be transmitted or they can be used to launch a script file.

Choosing **Macro Keys** from the **Setup** menu calls the **Macro Key** definition dialog box, which allows you to enter the literal string you want transmitted when each of the function keys are

depressed, or to specify a Script file name if you want a script file launched when the function key is pressed. If you wish the edit field to contain a script file name, check the **Script** checkbox next to the edit field and a file selection window will appear allowing you to automatically select the script file. The text box may contain either a literal string or a script file name, but not both. In the example below, note that the definition for F1 is defined as a literal string while the definition of F2 is a Script File. Additionally the "\r" in the definition for F1, instructs QuickLink Mobile to send a Carriage Return after typing out the characters. Clicking **OK** saves the macro keys for future sessions. For more information on Scripts, refer to the next section.



Scripts

Scripts are miniature programs-within-a-program, and can totally automate your online sessions (the **Online Services** module of QuickLink Mobile is actually a script file, for example). Properly programmed, a script can call a BBS, log on to it, and automatically read your mail, and log out, all by pressing a single key. This section describes how to write and run scripts.

Running Scripts

Scripts are actually files that contain within them a list of instructions and commands. Scripts, therefore, are on your disk and must be opened and run. There are three ways to do this:

1. With a Macro Key, as described previously in this chapter. Checking the Script checkbox in the **Macro Keys** dialog box calls another dialog box to select a script file from your hard disk.

2. Choose **Run Script** from the **Connect** menu, which calls the same dialog box to open and run a script file on your hard disk.
3. By dialing a telephone number from the Data Phone List with an associated script.

QuickLink Mobile Script Language Elements

The QuickLink Mobile script language is made up of commands that may be used to create a script file. A script file may be created using the Notepad on the Edit Menu. You may also use any external editor to create the script file.

A script file is used to instruct QuickLink Mobile to perform a predefined set of operations. Script files can be defined to automatically perform the dialing and logon process necessary to automatically connect to a remote computer. The script can also be programmed to perform specific steps once the connection to a remote computer is made.

The commands that comprise the script language may be entered in either upper or lower case. Each line of the script may contain only one command. The commands may be indented to any point you wish in order to enhance readability. Blank lines may also be inserted in the script files to show breaks in sections on the script statements.

You may include comments in the script file by placing a semicolon in the first position of the line that contains a comment. Any information appearing on the line after the semicolon will be considered as comments, even if the information includes otherwise valid script commands.

When sending strings to a remote computer, a string may be defined to include a literal value, a Return character or an ASCII character represented by its decimal value. Literal character strings must be enclosed by double quotes. A return character is defined by including a '\r' in the command line. An ASCII character is defined by including a '\ddd' in the command line, where ddd is the decimal value of the ASCII character (see Appendix B for ASCII Value Table). For example, you would use this feature to send a Control-C to a remote computer.

When a script is running, a message will be displayed in the status area of the Menu Bar. You may abort a script execution by simply pressing the Escape key.

Script Language commands

The QuickLink Mobile script language is comprised of the following commands:

Baud Statement:

This Statement allows you to specify the baud rate to be used when the script file is executed.

Format: **Baud "rate"**

"Rate" can be set to 110, 150, 300, 600, 1200, 2400, 4800, 7200, 9600, 12000, 14400, 19200, 38400, 57600, or 115200

Clearstring Statement:

This command will clear the contents of the special variable called InString. This variable is created by the use of the second form of the In Statement defined below.

Format: **Clearstring**

CLS Statement:

This command will clear the QuickLink Mobile Terminal Window and has the same effect as selecting Clear Screen on the Edit Menu.

Format: **CLS**

The CLS statement will not impact the contents of the Line Buffer.

Data Statement:

This statement is used to specify the number of data bits, either 4, 5, 6, 7 or 8 to be used during the execution of the script.

Format: **Data "#"**

Where # is either 4, 5, 6, 7 or 8.

Dial Statement:

This command will instruct QuickLink Mobile to dial a specified telephone number.

Format: **Dial "xxx-xxxx"**

Where, xxx-xxxx is the telephone number to be dialed. QuickLink Mobile will use the dialing prefix defined on the Modem Setup Dialog Box. You must have an AT command set compatible modem and have English Responses set on to use this statement.

Example: **Dial "1-714-362-5822"**

The example above would instruct QuickLink Mobile to dial the Smith Micro Software support BBS.

Echo Statement:

This command will cause a literal string that follows the command to be displayed in the local Terminal Window.

Format: **Echo "xxxxxxx"**

Where, xxxxxx is a literal string to be echoed to the Terminal Window. The string must be enclosed by double quotes.

Example: **Echo "This is a sample string"**

The string, *This is a sample string*, will be displayed in the local Terminal Window.

End Statement:

This command is used to mark the logical end of a set of script commands.

Format: **End**

Execution of the script instructions is halted upon encountering an END command.

Goto Statement:

This command will transfer the execution to a specified procedure name.

Format: **Goto Procedure:**

Where *Procedure:* is the name of a procedure defined in the script file. The procedure name must end with a colon. The following script code shows the use of the GOTO statement.

Example Start:
 Echo "This is an example"
 Goto Step2:
 Step1:
 End
 Step2:
 Goto Step1:

If you follow the execution of the script above, the last procedure executed is Step1: that terminates the script with the END Statement.

If Statement:

The If Statement allows you to test the contents of a special variable called InString. InString is created by using the second form of the In Statement defined below.

Format: If InString = "xxxxxxx" Goto Procedure:

Where xxxxxxx is a literal string not longer than 40 characters. If InString equals the specified literal string then execution is transferred to the procedure specified in the Goto.

Example: If InString = "Password" Goto Step2:

In Statement:

There are two forms of the In Statement. The first form of the statement will cause QuickLink Mobile to wait "n" seconds for string of characters to be received from a remote computer.

Format: In "xxxxxxx" n

Where, xxxxxx is a string for which you want QuickLink Mobile to wait. QuickLink Mobile will wait up to "n" seconds for a message to be received from a remote computer. If after waiting "n" seconds, the string is not received, the remainder of the commands in the script file will be bypassed.

Example: In "Password?" 30

QuickLink Mobile will wait 30 seconds for the string, *Password?*, to be received from the remote computer, before continuing with the execution of the script.

The second form of the In Statement allows you the capability to receive one character at a time from your modem. Each character will be added to a special buffer called InString.

Format: **In InString**

InString may contain up to 40 characters of input and will generate an error if more than 40 characters are received. InString may be used in an If statement for testing and controlling the flow of the script execution.

Out Statement:

This command will cause a string to be transmitted to a remote computer.

Format: **Out "xxxxxx"**

Where, xxxxxx is a string to be transmitted to a remote computer.

Example: **Out "DEMOPASS\r"**

QuickLink Mobile will transmit the string, DEMOPASS, to the remote computer followed by a Return character (\r).

Pause Statement:

This statement will cause the execution of a script file to be temporarily halted until the user presses a key on the keyboard.

Format: **Pause**

A message will be displayed in the terminal window, instructing the user to Press a Key to Continue.

Parity Statement:

This statement is used to specify the parity to be used during the execution of the script.

Format: **Parity "x"**

Where, x is "N" for none, "O" for odd, "E" for even, "M" for mark, and "S" for space parity.

RtsCts Statement:

This statement is used to specify whether the RTS/CTS hardware flow control is to be used when executing this script.

Format: **RtsCts "xx"**

Where, xx is "ON" for on or "OFF" for off.

Stop Statement:

This statement is used to specify the number of stop bits, either 1, 1.5 or 2 to be used during the execution of the script.

Format: **Stop "#"**

Where # is either 1, 1.5 or 2.

Until Statement:

This command will cause QuickLink Mobile to wait until a specified time before continuing with the execution of the script.

Format: **Until "hh:mm"**

The time must be specified in the form of 24 hour (military) time.

Wait Statement:

This command will cause QuickLink Mobile to delay for 'n' seconds before proceeding with the next script command.

Format: **Wait n**

Where 'n' is the number of seconds you want QuickLink Mobile to wait before proceeding to the next script command.

Example: **Wait 15**

QuickLink Mobile will wait 15 seconds before executing the next step in the script file.

XonXoff Statement:

This statement is used to specify whether the Xon/Xoff flow control is to be used when executing this script.

Format: **XonXoff "xx"**

Where, xx is "ON" for on or "OFF" for off.

In addition to the above script commands, the QuickLink Mobile script language includes a number of predefined variables that

may be used in writing a script. Many of these variables are used by QuickLink Mobile to provide automatic connection to CompuServe, Dow Jones and GENie. The following list of variables are included in the script language:

Variable	Meaning
Compunet	Telephone number for CompuServe's own network
Telenet	Telephone number for Telenet
Tymnet	Telephone number for Tymnet
Cacct	CompuServe account number
Cpass	CompuServe password
Dpass	Dow Jones password
Guser	GENie user number
Gpass	Genie password

You will find a number of script files (.SRP) in your QuickLink Mobile default directory that use the above script commands and variables for accessing CompuServe, Dow Jones and GENie. These files are listed below:

File	Use
COMPUSRV.SRP	Connects to CompuServe
DOWJONES.SRP	Connects to Dow Jones
EMAIL.SRP	Connects to the American Email BBS at Smith Micro Software, Inc.
GENIE.SRP	Connects to GENie

You can use the above files as examples for creating your own scripts. Also, if you are not in the United States and want automatic access to CompuServe, Dow Jones or GENie simply modify the proper script file, from the list above, to operate with your country's telephone access system.

Appendix A

Terminal Emulation Keys

The special VT52/100/102 keypad and other special VT52/100/102 unique keys have been translated into the PC keyboard. Use the following keypresses for special VT terminal keys:

VT100 Key	Equivalent PC Key
Keypad 0	Alt 0
Keypad 1	Alt 1
Keypad 2	Alt 2
Keypad 3	Alt 3
Keypad 4	Alt 4
Keypad 5	Alt 5
Keypad 6	Alt 6
Keypad 7	Alt 7
Keypad 8	Alt 8
Keypad 9	Alt 9
Keypad -	Alt -
Keypad ,	Alt A
Keypad .	Alt B
Keypad ENTER	Alt =
PF1	Alt F1
PF2	Alt F2
PF3	Alt F3
PF4	Alt F4
Del	Del

Appendix B

ASCII Character Table

The following table lists the ASCII character set and each character's corresponding decimal and hexadecimal code equivalent. This chart is often useful for creating scripts and as a reference.

CTRL	CODE	DEC	HEX
@	NUL	0	00
A	SOH	1	01
B	STX	2	02
C	ETX	3	03
D	EOT	4	04
E	ENQ	5	05
F	ACK	6	06
G	BEL	7	07
H	BS	8	08
I	HT	9	09
J	LF	10	0A
K	VT	11	0B
L	FF	12	0C
M	CR	13	0D
N	SO	14	0E
O	SI	15	0F
P	DLE	16	10
Q	DC1	17	11
R	DC2	18	12
S	DC3	19	13
T	DC4	20	14
U	NAK	21	15
V	SYN	22	16
W	ETB	23	17
X	CAN	24	18
Y	EM	25	19
Z	SUB	26	1A
[ESC	27	1B
\	FS	28	1C
]	GS	29	1D
^	RS	30	1E
_	US	31	1F

CODE	DEC	HEX
SP	32	20
!	33	21
"	34	22
#	35	23
\$	36	24
%	37	25
&	38	26
'	39	27
(40	28
)	41	29
*	42	2A
+	43	2B
,	44	2C
-	45	2D
.	46	2E
/	47	2F
0	48	30
1	49	31
2	50	32
3	51	33
4	52	34
5	53	35
6	54	36
7	55	37
8	56	38
9	57	39
:	58	3A
;	59	3B
<	60	3C
=	61	3D
>	62	3E
?	63	3F

CODE	DEC	HEX
@	64	40
A	65	41
B	66	42
C	67	43
D	68	44
E	69	45
F	70	46
G	71	47
H	72	48
I	73	49
J	74	4A
K	75	4B
L	76	4C
M	77	4D
N	78	4E
O	79	4F
P	80	50
Q	81	51
R	82	52
S	83	53
T	84	54
U	85	55
V	86	56
W	87	57
X	88	58
Y	89	59
Z	90	5A
[91	5B
\	92	5C
]	93	5D
^	94	5E
_	95	5F

CODE	DEC	HEX
`	96	60
a	97	61
b	98	62
c	99	63
d	100	64
e	101	65
f	102	66
g	103	67
h	104	68
i	105	69
j	106	6A
k	107	6B
l	108	6C
m	109	6D
n	110	6E
o	111	6F
p	112	70
q	113	71
r	114	72
s	115	73
t	116	74
u	117	75
v	118	76
w	119	77
x	120	78
y	121	79
z	122	7A
{	123	7B
	124	7C
}	125	7D
~	126	7E
DEL	127	7F

Appendix C

Advanced Considerations

If you are a Windows user that knows every line of your WIN.INI file, or if you are a Windows user who just wants to know a little more about how your system operates, this appendix is filled with the QuickLink Mobile arcane knowledge you are looking for. Topics include:

- The files used to launch QuickLink Mobile
- How to set Windows to use different IRQ's for your modem
- What QuickLink Mobile adds to your WIN.INI file and your system
- The SMSSETUP.DAT file
- The Error Code table, should fax transmissions be unsuccessful
- Common Hayes compatible AT commands.
- How the Fax Manager launches.

Program filenames

For users who will be launching QuickLink Mobile in manners other than the Windows Program Manager, the following is a list of applicable filenames and the programs they run:

QL2FAXW.EXE:	QuickLink Mobile main application
QLFVIEW.EXE:	Fax Viewer
FMLAUNCH.EXE:	Launches the appropriate class Fax Manager
FAXMGRC1.EXE:	Fax Manager for Class 1 modems
FAXMGRC2.EXE:	Fax Manager for Class 2 modems

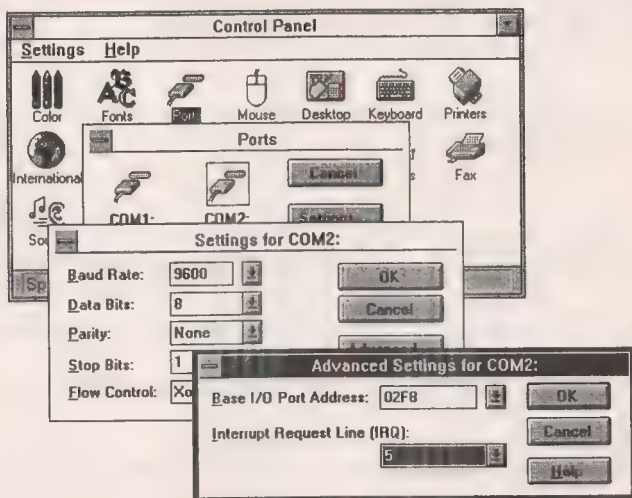
The icons are embedded in the .EXE files.

Windows IRQ settings

Since various adaptors such as scanners, bus mice, network cards, and sound boards, and external device adaptors using **IRQ's (interrupts)**, it is possible that the default IRQ settings for your modem will not work. If you suspect there is an IRQ conflict, QuickLink Mobile can work around the problem if you do the following:

1. Change the IRQ jumper or DIP switch on the modem itself (your modem manual will show you how, if possible).
2. Go into the Windows Control Panel, Ports icon and set the IRQ on the appropriate COM port to the setting that matches the modem. (This only applies to Windows version 3.1)

As an example, suppose that your modem is set to COM2 (which normally uses IRQ3) and cannot function because IRQ3 is used by your scanner card, and that IRQ 5 is available. Open your PC and set the appropriate jumpers to COM2, IRQ 5. Launch Windows and open the Control Panel. Double-click on **Ports**, which opens the Ports dialog box. Select COM2 and click **Settings**. From the Settings dialog box, click **Advanced** and choose IRQ5 from the IRQ pull down menu. Click **OK** to close the dialog boxes down and set the change.



The WIN.INI file and your system

When QuickLink Mobile installs on your system, it makes changes to your WIN.INI file, located in your \WINDOWS directory. The following lines are added:

```
[Quick Link II Fax]
InstallDirectory=C:\QLMOBILE
LanguageResource=QLFENGL.DLL
ModemMonitor=0
FaxManagerX=566
FaxManagerY=454
(some additional lines may also appear)
```

These lines are normally changed when configuring QuickLink Mobile as described in previous chapters. However, if you want to alter the settings directly, they will take effect the next time QuickLink Mobile is run.

There are also lines added to the WIN.INI file by QuickLink Mobile in the [PrinterPorts] section and the [devices] section for the QuickLink Mobile Printer Driver. These lines can be manually deleted, or automatically deleted by removing the printer driver with the Windows Control Panel.

QuickLink Mobile installs all of its files into the QuickLink Mobile install directory (normally \QLMOBILE) except for one file, located in the \WINDOWS\SYSTEM directory. If for some reason you wish to completely uninstall QuickLink Mobile, delete the QuickLink Mobile install directory, the aforementioned lines in the WIN.INI file, the printer driver, and the following file from the \WINDOWS\SYSTEM directory:

C:\WINDOWS\SYSTEM\QLFXDRV.RDRV

The SMSSETUP.DAT file

When QuickLink Mobile is run for the first time, a file called SMSSETUP.DAT is automatically created. When settings are modified, the changes get written into this file. Therefore, if this file is corrupted, the settings will change in unpredictable ways, and QuickLink Mobile might not function properly.

If QuickLink Mobile suddenly starts acting mysteriously, consider deleting this file and running QuickLink Mobile again. This will recreate the file and reset the program options to the factory defaults. This is also a good way to reset the program if you purchase a new modem or fax/modem and want to reconfigure the program.

Error Codes

In the unlikely event of an unsuccessful fax transmission, the Fax Logs will display an error code. You may get a detailed explanation of the error by clicking the **Errors** button when displaying the **Info** on the Fax Log entry, or from the Help system. The following is a summary of the Error Codes:

Error Codes:

100 - 199	Modem Errors
200 - 299	File Errors
300 - 399	Send Fax Errors
400 - 499	Receive Fax Errors
500 - 599	Miscellaneous Errors

Modem Errors:

Error: 101	Unable to open COM port.
Error: 102	Unable to detect modem.
Error: 103	Modem not a fax modem.

File Errors:

Error: 201	Unable to create necessary file.
Error: 202	Out of disk space.
Error: 203	Error reading file.
Error: 204	Error writing file.
Error: 205	Unable to close file.
Error: 206	Unable to access file.
Error: 207	Unable to open fax file.
Error: 208	Unable to open exchange file.
Error: 209	Unable to open setup file.
Error: 210	Unable to create/send cover page.
Error: 211	Unable to create/send headers.
Error: 212	Unable to open file.
Error: 213	Error reading exchange file.

Send Fax Errors:

Error: 301	No dial tone detected from modem.
Error: 302	Number dialed was not a fax machine.
Error: 303	Number dialed was busy.
Error: 304	No carrier detected after dial.
Error: 305	Error occurred during fax training.
Error: 306	No CONNECT message from remote.
Error: 307	No End Of Page acknowledgment received.
Error: 308	No phase D page response received.
Error: 309	Unknown phase D error.
Error: 310	No End Of Page response received.
Error: 399	Unknown send error.

Receive Fax Errors:

Error: 401	Remote fax failed to train.
Error: 402	Remote fax failed to train.
Error: 403	Error during End Of Fax handshake.
Error: 404	Error occurred during End Of Page.
Error: 405	Unknown phase D error.
Error: 406	Received no acknowledgment during End Of Page.
Error: 407	Time-out on end of reception.
Error: 408	No end of transmission acknowledgment received.
Error: 499	Unknown fax receiving error.

Miscellaneous Errors:

Error: 501	Unable to allocate memory.
Error: 502	The selected document contains 0 pages.

AT command set

Most modems implement the AT Command Set as a method of issuing commands to the modem. The actual implementation by your modem manufacturer is documented in the hardware manual included with your modem. The chart below is a summary of the more commonly used AT commands. Many users may never find a need to use this command set, as QuickLink Mobile does much of the work for you.

Command	Description
AT	Attention command and precedes command line
A/	Repeat preceding Command
A	Answer call immediately
DT	Dial Touch Tone Mode
DP	Dial Pulse Mode
E	Command Echo Disabled
E1	Command Echo Enabled
H	Hangup (on-hook)
H1	Off Hook
I	Output Product Code to PC
L	Speaker Volume (L0, L1, L2, L3)
M0	Speaker off
M1	Speaker on until Carrier Detect
M2	Speaker always on
M3	Speaker on from dial to Carrier Detect
O	Return to On-line Communications
O1	Return to On-line Communications & Retrain

Q	Send Result Code Messages
Q1	Do not Send Result Code Messages
Sr?	Read & Display Contents of Register (r)
Sr=n	Set Register (r) to Value (n), ATSO=1, answer phone on first ring
V	Result Code Messages sent in Numeric format
V1	Result Code Messages Sent in English Word Format
X	Extended Status Mode
Y	Long Space Disconnect
Z	Reset and Initialize Modem
+++	Escape Code from On-line to Command State

Fax Manager launching

The Icon labeled "Fax Manager" in the QuickLink Mobile Windows Program Group actually runs the program FMLAUNCH.EXE. This program in turn determines what Class of fax/modem you have by reading the SMSSETUP.DAT file and loads the appropriate Fax Manager into memory. If you will be launching the Fax Manager in a special way, you can launch the correct Fax Manager file by loading it directly, bypassing FMLAUNCH.EXE. You can double-check which class fax/modem you have by clicking the **Hardware** button in the **Modem Setup** dialog box.

Appendix D

Troubleshooting

The subject of telecommunications is filled with many variables and potential pitfalls. This Appendix addresses some of the problems you might encounter with QuickLink Mobile, and how to solve them.

General/Data Comm troubleshooting

You cannot communicate with your modem or fax/modem, or you receive unintelligible characters in the terminal window.

- The COM port and/or IRQ used by your modem or fax/modem is also being used by another serial device installed in your computer. Refer to Chapter 1 for more information.

When you type a character in the terminal window, it appears twice or not at all.

- QuickLink Mobile has its **Local Echo** feature turned on and the modem's echo feature is also turned on. If the system you are calling echoes your typed characters, turn off **Local Echo** in the **Terminal Options** dialog box.

You cannot hear the modem dial or connect.

- Add **M1L3** to the end of your **Init String** in the **Modem Setup** dialog box.

Your modem or fax/modem disconnects while communicating remotely.

- The other side has hung up.
- Your telephone line may have call waiting and a call has come in. Call waiting can be disabled in the **Modem Setup** dialog box. If this does not work, contact your local telephone company.
- Someone may be picking up an extension connected to the line your modem or fax/modem is using.

- You are using an MNP 5 or v.42bis modem and the other modem does not support MNP 5 or v.42bis. Refer to your modem manual and disable them.
- Your **Line Settings** do not match those of the other communicating device.

Characters are dropped at high baud rates (9600 or higher).

- Ensure you are using Windows 3.1 and the Windows 3.1 communications driver, or another 3rd party high-speed communications driver along with a 16c550 UART serial chip.

Faxing troubleshooting

QuickLink Mobile is not able to connect or receive faxes from remote fax sources.

- Ensure the Fax Manager is loaded and **Fax Receiving** is enabled.
- Your fax/modem may not be compatible with the specific brand of fax connecting. Contact the modem manufacturer to determine if there is a known problem.
- Some fax machines cannot handle certain Fax IDs. For example, some fax machines require that only numbers be used as the Fax ID, while others require only upper case or no spaces. Your Fax ID can be changed in the **Receive Fax Setup** dialog box.

QuickLink Mobile connects to the remote fax machine, but none of the document pages are sent or are blank.

- If you have scheduled the fax to be sent, you may have deleted the fax document before it was sent.
- You may be trying to send a fax from the floppy disk. This is not recommended, since disk access times are longer when

files are on the floppy drive. Copy the file to your hard disk and try again.

Faxes are being sent at a lower baud rate than the rated speed of the fax/modem or the specified Maximum Baud Rate in the Send Fax Dialog box.

- Your fax/modem can't connect at the faster baud rate. This can be caused by poor line quality, speed limitations of the receiving fax machine, or a hardware incompatibility. This is not necessarily indicative of any problem with your fax/modem.

When you view a received fax, there appear to be missing lines, garbage, or "bar code".

- Your fax/modem may be incompatible with the sending hardware.
- There may have been a bad telephone connection for the call.
- Your fax/modem may be improperly installed or damaged.

The Fax Viewer or Fax Manager will not read a .QFX or .REC file.

- Re-create the .QFX file from the original graphic or document.
- Export the .REC file to a .PCX and back into a .QFX and try again.

QuickLink Mobile says that there are faxes scheduled to be sent, though Viewing the Schedule reveals nothing.

- Delete the file SCHEDULE.QL2 from the QuickLink Mobile install directory. This file contains the schedule information and is likely written to the disk incorrectly. It will be re-created the next time you schedule a fax.

When loading the Fax Manager from the Program Manager, or sending fax commands to your fax/modem, there is an error to the effect that the fax/modem cannot be found, or initialized, or opened.

- You double clicked on the wrong class Fax Manager. Close down the loaded Fax Manager and double-click the other one.

Index

.BMP 17, 26
.DCX 17, 24, 26
.HFX 17
.MAC 26
.PCX 17, 24, 26
.QFX 24, 26
.REC 15, 24
.TIF 17, 24, 26

A

American E-Mail 36
Answer Mode 46
ASCII 40, 43, 49
AT Command Set 79
Auto Baud 58
Auto Detect 6

B

Baud Rate 38
Broadcasting 28
Button Bar xii, 7

C

Capture Text 44
Card and Socket Services
 (CSS) 1, 2, 3
CardTest 1, 2, 3
Clear Screen 45
CompuServe 61
CompuServe B/B+ 49
Connection Type
 Mobile Connection 6, 55
 Standard Connection 6, 53
Cover Page 10
Graphic 34
Setup 33

D

Data Phone List 36-39
Default Data Settings 8
Default Fax Settings 8
Default Printer 5
Default Settings iii
Dial 35
 Credit Card Usage 54, 56
 Redial on Busy 36
 Redial Timeout 36
Dial Prefix 36
Document Type Selection 12
Dow Jones 61
Downloads
 Download Status 44
 Multiple File Protocols 43
 Single File Protocols 43-44

E

Editing Faxes 17
Error Codes 78-79
Export From Fax 24

F

Fax ID String 32
Fax Logs. *See* Send, Receive
 Fax Logs
Fax Manager 9, 10, 12, 28-34, 46
 Always on Top 29
 Enable Fax Receiving 28
 Loading 28, 32
 Manual Fax Receive 29
 ModemMonitor 29
 Percent Bar 29
Fax Phone List 10, 21
 Group 22

- Mark Group 22
- Fax Schedule 10
- Fax Scheduling 26
 - View Schedule 27
- Fax Viewer 16–19
 - Copy 17
 - Fit All 18
 - Goto Page? 17
 - Paste 17
 - Rotate 18
 - Scale Image 18
 - Thumbnail view 18
- File Transfers 39–44
- Freeing the COM Port 48

G

- GEnie 61
- Graphics, Received Faxes are
 - Export From Fax 24
- Graphics, Received Faxes
 - as 24
- Group 22

H

- Hangup 39
- Help 13
- High Resolution. *See*
 - Resolution; Send Fax Setup

I

- Import to Fax 24, 25
- INBOX 12, 15, 33
- Initialization
 - String 7, 54, 56
- Installing QuickLink Mobile 1, 2
- IRQ 75

K

- Kermit 41, 43, 49
 - SuperKermit 41, 43, 49

L

- Line Settings 38, 52, 52–60
 - Data Bits 52
 - Flow Control 53
 - Parity 52
 - Stop Bits 52
- Low Resolution. *See* Resolution

M

- Macro Keys 62–63
- Manual Fax Receive 29
- Manual Fax Send 27
- Manual Send 10
- Mark. *See* Fax Phone List
- Mark Group. *See* Fax Phone List
- Menu Bar 7
- MNP Level 5 53
- Modem Setup 53
 - Answer Mode 46, 57
 - Dial Prefix/Suffix 54, 56
 - Dial String 54, 56
 - Hangup String 54, 56
 - Hardware 53, 55
 - Initialization
 - String 53, 54, 55, 56
 - Mobile Connection 55
 - Number of Rings to Answer Phone 46
 - Standard Connection 53
- ModemMonitor 29, 46–48

N

- Number of Rings to Answer Phone 46

O

- Off-Line 48, 58
- On-Line 48, 58
- Online Services. *See* Services
- OUTBOX 15, 31

P

Paste to Host 45
Print Faxes
 Scale to Fit 19
Print Setup 9
Program Filenames 75
Protocols
 ASCII 49
 CompuServe B/B+ 49
 Kermit/Super Kermit 49
 Xmodem 50
 Xmodem 1K 50
 Xmodem CRC 50
 Ymodem 51
 Ymodem-G 51
 Zmodem 51

Q

QuickLink Mobile Fax Print
 Driver 9

R

README 5
Receive Fax Log 12, 23
 Errors 23
Receive Fax Setup 32
 Fax ID String 32
 Receive Options 32
 Auto Fax-Print on Re-
 ceive 33
 INBOX 33
Receive File 39
Redial 58
Run command 4

S

Save Documents to QFX
 File 15
Schedule 83. *See also* Fax
 Schedule
Scripts 63-70
 Running Scripts 63-64
Send Fax 11
Send Fax Information 10
Send Fax Log 24

Errors 24
Send Fax Setup 29
 Control Options 31
 Dedicate CPU 31
 RTS/CTS Flow Con-
 trol 31
File Conversion Op-
 tions 30
 Center Text/Graphics 30
 Full Page Text/Graph-
 ics 30
 High Resolution 30
 OutBox 31
Send File 39
Services Setup 61-62
SMSSETUP.DAT 77
Status Bar 7
System Requirements 1

T

Terminal Options 57, 57-60
 Button Bar 58
 CR to CR/LF 57
 Destructive Backspace 57
 Line Wrap 57
 Local Echo 57
 Off-Line 58
 On-Line 58
 Status Bar 58
 Terminal Emulation 59
 VT100/102 Setup 59
 Answerback Message 59
 New Line Mode 59
 Tabs 59
Terminal Type 38
Terminal Window 7
Timer 7
Title Bar 6

U

Uploads
 Multiple File Proto-
 cols 41, 41-42
 Single File Protocols 40-
 41
 Upload Status 42

V

V.42bis 53

View Fax. *See* Fax Viewer

View Fax Schedule 27

W

WIN.INI 76

WYSIWYG faxing 9

X

Xmodem 40, 43, 50

 Xmodem 1K 40, 43, 50

 Xmodem CRC 40, 43, 50

Y

Ymodem 41, 43, 51

 Ymodem-G 41, 43, 51

Z

Zmodem 41, 43, 51



If you think QuickLink II Fax™ is flexible, powerful, and easy to use, you'll love the enhanced version - QuickLink GOLD. This full-featured, integrated data and fax communication product goes far beyond the many great features found in QuickLink II. QuickLink GOLD adds a feature that will convert a received fax into text which can then be edited and returned to the sender. A floating toolbar eliminates steps required to gain access to commonly use functions. Data communication enhanced features include additional file transfer protocols, on-line editing functions, and an enhanced scripting language. All this can be accomplished with a personal computer running Microsoft® Windows™ 3.0 or later with a send-receive fax/modem. Here is a partial list of QuickLink GOLD's enhanced features:

- Flexible Optical Character Recognition (OCR), configurable for foreign languages, different font sets, and dot matrix printouts. It can automatically convert faxes into text files upon fax reception, specify regions and data types, and verify suspect characters.
- Full DataComm feature set, including Z-modem file transfer protocol, scroll back buffer, a robust scripting language, full data host mode, 5 terminal emulations, and the ability to copy and paste while on-line.
- In addition, the program supports unlimited number of data and fax phone lists and records.
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